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The CAVALRY JOURNAL

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THE UNITED STATES CAVALRY ASSOCIATION
COLONEL GEORGE M. RUSSELL, Cavalry, Editor

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Organized November 9, 1885

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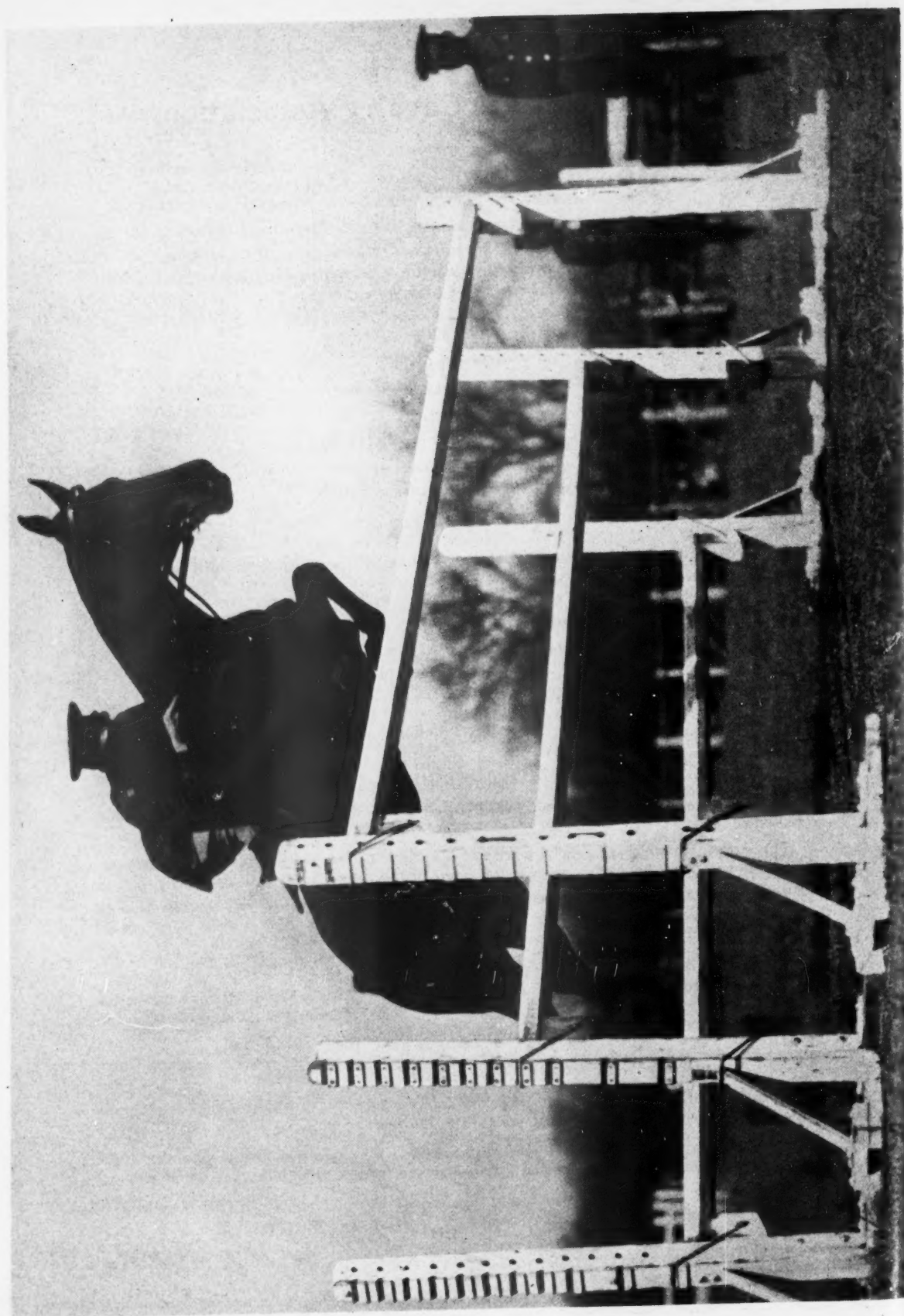
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General William B. Eustace, Captain, 103d Cavalry, jumping over a fence, on "Dan"

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Influences of Mechanization, Motorization and Machine Guns on the Horse Cavalry Regiment's Tactics, Organization and Supply Methods

By COLONEL C. F. MARTIN, 13th Cavalry

I

TRENDS IN CAVALRY'S TACTICAL RÔLES AND ITS AUXILIARY WEAPONS

1. Shortly after the light machine guns were placed in the cavalry troop, I heard a seasoned cavalry regimental commander say that we were now nothing but mounted machine guns, that all rifle troopers would have to be tied to the machine guns, and that we ought to change our name accordingly.

I think there was, and still is, among hard-riding cavalrymen who early in their training were imbued with the idea that charging horses, pistols and sabers constituted the main bases of cavalry action, a considerable amount of sympathy with this exclamation tinged as it was with a sense of frustration and regret. However, invention and change go on as surely as time and in this modern age are inexorably linked with the universal conception of progress. We have discarded the saber and classified the pistol as a close-range emergency weapon.

As for the horse, despite the progress in mechanization and motorization, we feel that he is still indispensable. We have come to be more discriminating in judging both his powers and his limitations. We see him as something more than a weapon, something in certain ways better than a machine. For one thing we see him unsurpassed as a means of giving us, over varied terrain tactical maneuverability for small arms fire power, such as that provided by the machine gun.

2. In paragraph 79 of the Field Service Regulations, 1923, we find the following statement, in which the italics are mine:

"Cavalry is characterized by a high degree of mobility and by a relatively reduced fire power in proportion to the means employed. Its special value is derived from its mobility and the rapidity with which its fire power can be displaced from one position or locality to another. . . ."

"It finds its most intensive application under conditions which permit the most complete freedom of maneuver, and the exercise of its mobility. Its utility becomes limited as conditions are created tending to restrict freedom of maneuver; these conditions reduce the necessity for highly mobile organizations and create a correspondingly increased demand for those capable of developing a large volume of fire power and of conducting a sustained action."

There's room, between mechanized elements and the more slowly moving troops behind, for an element of in-between mobility, such as horse cavalry.

This paragraph was written before the introduction of the light machine gun and the anti-tank gun into the cavalry regiment.

It was also written before the improvements in motorization and mechanization with which we are becoming familiar today.

3. It is beyond the scope of this study to engage in a discussion as to the need for cavalry or its place in the military forces, but I believe a very brief synopsis of the evolution of modern cavalry rôles in combat has a bearing upon the subject here presented.

Prior to the World War the prevalent conception, at least in European armies, was that cavalry's special value in major combat operations consisted in its mobility and its power of shock action. Great commanders down to and including Napoleon not only recognized the value of cavalry in such rôles as reconnaissance, covering and providing security for other troops, etc., which have from a very early period seemed to be its special function, but also considered it as an effective means of intervention in decisive battles. But generally, in this connection, they thought of it as a means to be launched at a supreme moment as a speeding mass of men and horses against the enemy's lines—a shock force. Yet the most outstanding of these leaders from the earliest times recognized that cavalry could or should fight dismounted, and those of more modern times have perceived the value of developing the means of cavalry's dismounted fire-power. Napoleon himself said it should be capable of fighting with firearms in the same manner as the infantry.

During the World War, the rapid intensification and improved effectiveness of fire power, particularly that of machine guns and artillery, the limitation of maneuver space in front and on the flanks, the barbed wire and trenches, had the effect of tremendously restricting cavalry action as a means of combat and induced a rather general idea that in shock action or power in combat cavalry had lost most of its effectiveness.

While cavalry proved its effectiveness in some cases in the exploitation of breaches and in pursuit, notable opportunities for its employment seem to have been overlooked, even in those fields.

So as a result of the war the opinion developed in many quarters that the value of cavalry in combat rôles had been seriously impaired and that, in effect, all that remained to it was a certain degree of mobility and a relatively limited fire power. These ideas apparently did not, however, inspire any special aspiration for increasing the dismounted fire power of cavalry as a means toward re-establishing its crushing force or power of shock in combat.

4. After the war came rapid improvements in fast-moving mechanized combat vehicles and motor transport, as well as in aircraft and in means of communication (radio, motor vehicles, airplanes), and these elements tended to confirm a conviction that a third means of action—possessed of mobility or at least speed far exceeding that of horse cavalry and capable of carrying a high degree of fire power—has appeared upon the battlefield's horizon; many enthusiastic observers concluded in fact that mechanization and motorization constituted not merely a third, or additional means of combat, but one destined to displace not only horse cavalry but foot troops—infantry—as well.

It is true that, if not promptly and adequately opposed, these elements can rapidly overrun large areas of favorable terrain, accomplish much destruction and gain valuable information. It appears probable that nations that can afford it will use mechanized forces, often accompanied or followed by motorized troops, for such missions as that of supplementing aircraft on distant reconnaissance in search of information as a basis for concentrations and employment of large forces in campaign; as covering forces operating well ahead of large units, as well as for other appropriate missions both strategical and tactical.

However, it appears that with greater speed and the constant improvement of anti-tank weapons, there is for these new elements a corresponding loss of *effective fire power* and of the capacity for *sustained action*.

Furthermore, these fast-moving and formidable-looking mechanized elements still need roads or terrain of more or less uniform type permitting them to use their still-limited cross-country mobility. They are stopped by certain kinds of terrain that will be found in every large theater of operations. Bridges or fords are of special importance to their movements, whereas destruction or interdiction of these is becoming more and more easily accomplished, not only by aircraft but by motorized elements. They are, moreover, especially sensitive to interruption of fuel supplies, are tremendously expensive, and very subject to obsolescence.

It is impracticable, in this day of aircraft and heavy fuel needs, to motorize whole armies and move into enemy's territory at high speed. The mass of fighting troops will

with comparative slowness follow the more mobile covering forces. There will be wide fronts, extended flanks, and vulnerable rear areas in which troops with greater mobility than the mass and possessed of adequate fire power and the capacity for well-sustained action will find room for operations.

A point which seems to have been overlooked by the most enthusiastic proponents of mechanization is that great mobility itself creates such a gap between these elements and the slower-moving troops behind, which must ultimately take and hold ground, that there is room in between for an element of in-between mobility, such as horse cavalry.

5. Recent experience has brought a noticeable modification of first impressions as to the powers, as well as the limitations of mechanization and motorization, in their present stage of development and a more discriminating appreciation of the value of horse cavalry, not only as to its superior capability for certain purposes but also as to its special value when employed in combination with these elements. There seems to be a growing comprehension that mechanization is really a new form of cavalry, that mechanized cavalry and horse cavalry are supplementary. And if we go back in history we find something parallel to this conception in the existence of different types of horse cavalry used for different, we may say supplementary, purposes.

Reports of French maneuvers of 1933 show horse cavalry and mechanization working effectively together, and it was stated that whereas motor vehicles, armored cars and trucks were "slaves of the road" until favorable terrain was found, the horses were no more subordinated to the terrain than infantry and were indispensable for certain important missions.

In a discerning study by a French officer, which was translated in the *CAVALRY JOURNAL* for May-June, 1934, the author stated as his conclusion that for the future "nothing we can see can replace cavalry but cavalry. It will suffice for it to be adaptable."

This same author sees cavalry's *raison d'être* in *speed plus power*—power to enable it by itself to reduce the resistance which may ordinarily be opposed to it, and thus to *assure its mobility*. That power must, today, he says, be procured by fire—"not only the fire that stops but the power that breaks." If cavalry cannot regain its lost power he thinks it will not survive. He believes this power may be obtained by more tanks and more artillery.

He has overlooked, I believe, the value of the machine gun as a means of fire power—fire that both *stops* and *breaks resistance*.

Now if cavalry is to stop the enemy or to break his resistance in combat it will have to fight dismounted, and there is no more effective fire power for support of such action than the machine gun.

6. In paragraph 33, of our Field Service Regulations, we find the statement with reference to combat methods of cavalry—the italics again being mine:

"Small units may make a *mounted* attack when opposed to an *inferior* or *demoralized* enemy, or when the attack can be delivered from *close range* by *surprise*."

This statement shows that in our service dismounted action by cavalry is considered normal.

In addition to other factors, the accuracy and intensity of fire of artillery and machine guns, the mobility of these weapons, the speed with which they can be brought into action, are consistently diminishing the opportunities for mounted action. We find, therefore, that modern cavalry is being trained more and more in dismounted action, and that fire power is today the legitimate adjunct of its mobility. Not speed and shock, but mobility and fire power.

The important increase in the armament of machine guns of our own cavalry is coincident with the modern trend of thought as to the cavalry's rôles in modern combat, and we must conclude, at least so far as small arms fire is concerned, that our Cavalry is now characterized by a relatively high degree of fire power, and that its special value lies in its mobility over varied terrain and the rapidity with which its fire power can be displaced and effectively placed in action.

Paragraph 48 of the Field Service Regulations states that:

"Infantry has two general means of action: Fire and movement. Infantry fights by combining these two means of action."

In the general discussion up to this point the attempt has been made to establish the fact that this quotation is today as true of cavalry as of infantry. Our cavalry will fight mounted when the situation so indicates, even though we have discarded all cutting and thrusting weapons; and fire power will, or should, support its mounted actions. However, this discussion is concerned with dismounted action.

There are, of course, between cavalry and infantry combat, differences in methods of application, but these are conditioned by differences of organization and function or purpose. But while recognizing these differences, we are confronted with the fact that when cavalry has transported its personnel and fire power to the area where dismounted action is called for, its means of action are fire and movement, and it will fight effectively in the measure in which it properly combines these two means of action. It is of vital importance, therefore, that we understand this fire power now available to us and that we use it to the best advantage. This consideration affects questions of armament, organization, and training—both technical and tactical.

II

GENERAL CHARACTERISTICS AND FUNCTIONS OF CAVALRY WEAPONS

7. The cavalry regiment is provided, in addition to its

rifles, with weapons which have general characteristics as follows:

a. The "Heavy" (water-cooled) .30 caliber machine gun. It has a solid base, can be clamped in position, and is capable of sustained automatic fire. It is an effective weapon against personnel and against low-flying aircraft. It is properly used in what is called *general fire-support*. It constitutes one of the primary means with which the commander can influence the main effort of his forces.

b. The "Light" (air-cooled) .30 caliber machine gun. It is fired from a tripod; total weight of gun and tripod about 46 pounds. Its effective range is two to three times the average range of a rifle. It is capable of highly effective sustained rapid fire as a semi-automatic weapon or of small bursts of automatic fire; it can be used for automatic fire. Except for short distances, two men are required to carry it when it is not in pack. It is a very valuable machine gun, much more mobile dismounted than the heavy gun, very effective against personnel and low-flying aircraft. Its proper function in attack is that of *direct fire support* of the assault troops.

c. The 37-mm. gun, which is the only weapon we might classify as regimental artillery, is a very valuable weapon because of its effectiveness against machine guns and for other reasons. It is at present assigned to the regimental machine gun troop.

d. The .50 caliber machine gun, is used on scout cars; and in the machine gun troop, and will probably also be placed in the regimental train. Its primary function is action against light tanks, armored cars, etc.

III

FIRE AND MOVEMENT—THE .30 CALIBER MACHINE GUNS

8. Since we have brought this discussion to the point where we have considered dismounted action a normal function of horse cavalry, and have reminded ourselves that fire and movement are the two fundamental means of action of dismounted troops—cavalry as well as infantry—let us now consider for a moment how the infantry looks at the problem of combining fire and movement.

In paragraph 413, Field Service Regulations, we find that:

"In attack *rifle companies* are advanced to assaulting distance of the hostile position *under the supporting fire* of the artillery, infantry cannon, and *machine guns*, and their own alternating fire support."

Paragraph 14, Vol. III, Part I, Chapter 6, of our Basic Field Manual states:

"By making *use of cover* and of the *supporting fire* of the artillery and machine guns, rifle units will get as *near the enemy* as possible *without opening fire*. Normally this should be at ranges *less than 600 yards*."

Important points to note are that rifle elements are considered as movement elements, and that by use of cover, i.e., the accidents of terrain, and the supporting

fire of machine guns, these rifle elements advance to assaulting distance or—normally without opening fire—to ranges less than 600 yards.

Supporting fire by machine guns must be delivered from ranges much greater than 600 yards and must—if fire superiority is to be gained or supporting fire to have continuity—be continuously maintained.

Now, at present, the infantry is organized with its machine guns in the battalion, its howitzers or mortars (infantry cannon) under regimental control. The machine guns furnish both *general* and *direct* fire support to the rifle elements; but this is done normally by the battalion machine gun company under the general control and supervision of the machine gun officer, certain platoons providing general support and others—generally one to each assault rifle company—providing direct support on the front allotted to the rifle company. It is apparently exceptional for a machine gun platoon to be attached to a rifle company, operating in or as part of the battalion.

A recent article by an infantry officer (in the September-October, 1934, CAVALRY JOURNAL) discusses this question of machine gun support for infantry in a very interesting manner. He expressed the fear that his views might be considered unorthodox; but in my opinion they state very clearly and soundly the problem of combining fire and movement that today confronts dismounted troops in attack, whether infantry or cavalry. I therefore, quote extracts which seem to me very pertinent.

" . . . I proclaim the theory that the rifle is no longer the basic weapon of the infantry and that it is not a suitable weapon with which to gain and maintain fire superiority . . . I quote from Chapter I, Volume IV, in the 1931-32 Infantry School Mailing List: 'Dependence for gaining fire superiority is placed on what may be termed the base of fire. The base of fire of large units consists of supporting artillery. When we come to the infantry battalion its base of fire will be composed of machine guns and attached infantry weapons. A rifle platoon or squad, however, also may have a base of fire. . . . As a rule riflemen in the attack do not fire except at ranges under 400 yards. . . . Riflemen can not be expected to reply effectively to hostile machine gun fire at long and medium ranges. . . .'

"These quotations . . . certainly minimize the importance of the rifle as a satisfactory medium of gaining fire superiority on the battlefield. Fire and movement is the basis of infantry offensive. Fire without movement is useless and movement without adequate fire support is suicidal.

"The infantry auxiliary weapons, the light machine guns in particular, must be the mainstay in gaining and maintaining fire superiority. In the attack, riflemen are the basic movement elements. Combined they form small, light, flexible, easily

maneuverable groups, whose sole purpose is to close with the enemy. It is only in the last stages of the engagement, just prior to and during the assault, that the rifle becomes anything other than an emergency personal protection weapon. Only when supporting fire of machine guns must be lifted should rifle fire be generally resorted to. . . .

"A semi-automatic rifle . . . under 400 yards in the final state of an attack seems best to fill the gap between the lifting of fire by supporting weapons and the assault with the bayonet. . . ."

This writer then recommends the adoption of a light machine gun for the infantry rifle company, to be used only for *direct* fire support. He proposes a new infantry organization in which each rifle company would have two assault platoons of riflemen and one fire support platoon of light machine guns, with a section of riflemen (16 men) to serve as scouts, liaison agents, and replacements for the machine guns.

He recommends placing in a *battalion support company* (which would correspond to what is now the *battalion machine gun company*) its share of mortars and anti-tank weapons—with none of these weapons left in a regimental echelon from which detachments would be made to battalions. He holds that the battalion needs all the infantry weapons that the battalion commander must have combined to coordinate fire and movement tactics.

Briefly, under this organization, the infantry regiment would have only light machine guns—all organized as fire support platoons and placed in the rifle companies to provide direct fire support to the assault (rifle) platoons of those companies. It would have no *indirect fire* machine guns, but would depend upon the battalion support company of .50 caliber machine guns and infantry mortars and the artillery for indirect fire.

Rifle companies would have practically the same organization we now have for cavalry rifle troops. The plan would do away with what corresponds to our heavy (.30 caliber) machine guns, and place all other infantry weapons in the battalion, leaving the regimental commander to influence combat by the employment of his battalions, supporting artillery, tanks, etc.

9. The foregoing has a bearing particularly upon the questions:

a. As to whether the cavalry, whose combat functions normally do not involve so great a degree of sustained action as those of the infantry, needs the heavy machine guns.

b. As to whether squadron machine gun organizations would be preferable to a regimental machine gun company, and how they should be organized.

c. The best organization of the light machine guns in rifle troops.

d. The number of machine guns of the various types.

10. The heavy .30 caliber machine guns, being more suitable for indirect fire and for sustained direct fire than the light guns, will, I believe, meet a cavalry need in such cases as delaying action, in sustained defensive action, and as general support weapons in offensive action against an enemy in position. This type of machine gun supplements artillery in indirect fire and sustained direct fire action and, when no artillery is present, serves in some degree as a substitute for it. We should, I believe, retain it and endeavor to improve its mount. The question of how many guns are needed is bound up with that of the number of .50 caliber guns required and the organization of the heavier weapons. We shall return to this problem, that of the organization of machine gun troops (in regiment or squadron), and that of the number of guns, after a more detailed discussion of the .50 caliber gun.

11. As to the light guns, discussion has recently centered upon the question as to whether they should be organized as squadron machine gun troops, or be left in the troops, and if so, whether they should form a machine gun platoon or be placed in the rifle squads. Cavalry is accustomed to wide turning movements and the coordinated action of units of the size of squadrons and troops at considerable intervals. Every troop will need machine gun support, whether engaged separately or as part of the squadron.

Before the World War, we used to give a great amount of time to the training of troops in long-range rifle fire. We used combined sights by platoons or by designated "fire units" and fired up to 1,500 or 1,800 yards or even farther. In those days, the enemy was supposed to be visible or his location well known on the battlefield. Those conditions have disappeared; today "the battlefield is empty." . . . The rifleman will generally see nothing to fire at until he is very near the enemy—"less than 600 yards." What we were really doing was trying to use rifle fire to simulate what is today easily and much more effectively supplied by the machine gun; and the traditions established by that kind of rifle fire still linger in our thought and our training regulations. Both our machine guns can be effectively employed in direct fire support of troops up to, say, 1,200 or 1,500 yards. They differ from the rifle in eliminating a great deal of the personal error factor.

The light machine guns furnish for our movement, or assault, elements what the French have called a *base of fire*. Having them in the rifle troops does not materially affect the tactical maneuverability of the troops, facilitates supply since the rations and ammunition of the machine gun elements can be carried with those of the other members of the troop, and eliminates the evils of the constantly inevitable attachment of machine gun personnel to troops, often without a corresponding shift of supplies and equipment carried in the trains. The troops will need them in every engagement of any importance. I believe they should be in the troop.

As we have seen, the infantry have never placed their guns farther down than the battalion and even in the proposed new organization discussed above, which the proponent thereof considers somewhat radical, the organization as a fire-support platoon is favored.

In support of the organization of his rifle companies, he argues:

"Increased effectiveness of fire support elements and increased facility of maneuver concealed from enemy view by movement elements are the advantages for which we constantly strive. We have two separate and distinct elements to coordinate; light machine guns as supporting fire elements and small groups of riflemen . . . as maneuver elements. The characteristics of the two weapons must be adapted to the terrain. The light machine gun cries for commanding ground . . . the movement elements, small groups of riflemen cry for covered and accessible routes of approach toward the enemy, concealed lines of departure as close to the enemy as possible . . . flexibility of maneuver . . . and practicability of control. . . .

"Our reconnaissance of any terrain over which we intend to attack reveals certain general areas best adapted to fire support and certain general areas best adapted to maneuver purposes."

The light machine gun is in no sense a rifle, it corresponds in no way to the machine rifle which it displaced in the troop. The shoulder machine rifle was really in practice a semi-automatic rifle without the capacity for sustained fire, but with much more than the weight such a rifle will probably have if or when it appears in our equipment. The rifleman could, however, easily carry it with him as part of the maneuver element. The light machine gun squads have not the mobility of the rifle squads or platoons; and because of their greatly increased effective range, their value as fire support weapons, they should remain in position longer, maintain the continuity of the fire support, have their fire coordinated with the other fire-support weapons, and be displaced by echelon—one group maintaining the fire while the other advances to a new position. Thus they will permit the riflemen to make use of covered approaches and reach the enemy. They are a most valuable weapon, which we are fortunate to have. Their place can not be taken by semi-automatic rifles. Being true machine guns, they should be used as such—as fire-support weapons and not in the maneuver echelon which is best composed of riflemen.

There are other reasons. It will be noted that the proposed infantry organization provides for a section of riflemen (16 men) in the fire-support platoon of light machine guns to serve as scouts, replacements, etc. Machine guns must have their fire positions reconnoitered for them—and those positions are not usually, as has been mentioned, the ones the movement elements will make for; they must have scouts watching for surprise

attacks or counter attacks by enemy combat cars or other elements. If these guns are combined in a platoon a small group of riflemen can perform these duties; if separated, in the rifle squads, each rifle squad (which has only 4 or 5 riflemen left after dismounting with horses mobile) will be nothing but scouts or replacements for the machine guns, and there will be no maneuver echelon left. The problem of replacements will present itself as soon as the action starts.

Let us examine for a moment the cavalry rifle platoon, when dismounted.

Personnel	No.	Rifles
Leader (Lieutenant)	1	
Messenger	1	1
Platoon Sergeant	1	1
Sergeant file closer	1	1
First Squad	8	8
Second Squad	8	8
Third Squad	8	8
	28	27

When the platoon dismounts, and leaves its horses mobile, it is at once reduced by the sergeant file closer, as well as by 2 horseholders from each squad. Then, since the platoon sergeant, the messenger, and each squad leader do not, because of their other duties, ordinarily form part of the firing elements, we have (with no account taken of "second in command," scouts, and security or liaison agents for the squad):

Platoon Leader

1

Platoon Sergeant and Messenger

1

1

1st Squad 2nd Squad 3rd Squad

Leader	1	1	1
Riflemen	5	5	5

a maximum total of 15 riflemen as such, equivalent to about one infantry section—just what our infantry writer considers necessary as a scout, liaison, and replacement agency for the fire-support platoon of light machine guns.

Assuming that we place a light machine gun in each rifle squad, we add to the above (the driver of the light machine gun pack horse having gone to the rear):

Gunner	1	1	1
Assistant Gunner	1	1	1

It can be seen that in movement both the gunner and the assistant gunner are loaded with the machine gun and ammunition. Any scouting, guarding of exposed flanks, rear, etc., must be done by at least 2 or 3 men of the rifle squad; so our movement echelon is still more reduced. The necessity for replacements promptly com-

plicates the situation still more. The inevitable consequence will be that a proper combination of fire and movement will not exist, or will quickly cease and become all fire or all movement.

As for the corporal commanding the combined squad of a movement echelon and a fire-support echelon with conflicting requirements as to fire position, advancement, and coordination, he would have great difficulty in getting the combination required of the two means of action involved. The direction of either of the two elements is a big job for him.

In the meantime, the platoon leader who is supposed to coordinate the action of his platoon—both the movement echelon and the fire-support echelon, both within the platoon and in relation to adjacent platoons, has largely relinquished the control of both means of action.

If the machine guns of the rifle troop are not coordinated for fire support, other machine guns must be provided for that purpose, since it is true that fire superiority must be gained or there will be no movement, and fire superiority can be expected only through continuity and coordination of the fire. That implies a single coordinating head for a group of weapons.

The infantryman's suggestion of placing a rifle section in the fire-support platoon of light machine guns strikes at the problem of vital needs of machine guns not now fully met: the need for more men for use as reconnaissance and combat scouts, and for replacements. There should be more men in the light machine gun squad, and another pack horse for ammunition, or at least another ammunition pack for each two guns. If we do not have ammunition the guns become a handicap rather than an asset. At least in our war strength tables, we should provide enough men and enough ammunition with these weapons to make them reasonably self-sustained in these respects.

The cavalry platoon, therefore, does not lend itself well to the combined squad organization of rifles and machine guns. It is not only very much weaker in dismounted numbers than the infantry platoon of 57 enlisted men, but it lacks an intermediate group such as the infantry platoon has in the section. In fact, as shown above, it is dismounted with its horses mobile just about equal to the infantry section and has a movement echelon too small to separate into three decentralized units.

From this analysis, it seems that the machine guns should be combined into a unit whose fire is coordinated, maintained by means of echeloned displacements and delivered from positions best suited to the fire support echelon, while the rifle platoon operates as a coordinated movement or maneuver unit, either under the lieutenant or platoon sergeant.

(To be continued)

The U. S. Cavalry Association is desirous of purchasing one or more copies of "A History of Fort Riley" by Captain Woodbury F. Pride.

Hodson of Hodson's Horse

BY THISTLE

WILLIAM STEPHEN RAIKES HODSON is famous as an irregular cavalry leader of the Indian Mutiny times. His moral character has been the subject of considerable controversy: his enemies accuse him of serious iniquities; his admirers deny these and hold him up as an unjustly accused man.

It is most difficult for anyone, who does not understand the conditions and feelings in India in Mutiny times, to form an unbiased judgment on Hodson.

Born in 1821, the son of a Gloucestershire parson, he was educated at a public school and the Varsity. He was not commissioned until he was twenty-three; consequently, he was much older than the majority of his contemporaries in the service.

He was posted, in the first instance, to an Indian infantry battalion of the Honorable East India Company's service and served, first with this and subsequently with another similar unit, through the First Sikh War.

After this war he exchanged into the 1st Bengal Fusiliers, a European battalion in the Company's service. As a result of the war, the Indian Government took over political charge of the Sikh State and appointed a British Resident at Lahore. To aid the new administration of law and order, a politically controlled¹ military irregular corps, named the Guides, was formed in the Northern Punjab. The duties of the Corps (composed of both cavalry and infantry) comprised the collection of information about roads, rivers, fords, ferries, passes, etc., and particulars about the supplies available in the various localities. It had to be able to fight, carry out police duties, and to furnish guides when required.

In 1846, through the favor of Sir Henry Lawrence the Resident, whose acquaintance he had made in the Sikh War, Hodson was appointed Adjutant and Second in Command of this Corps. He served with the Guides in the Second Sikh War; and in 1852 he was transferred to "Civil Employ," made Commandant of the Corps of Guides, and given charge of a civil district. He was graded as an Assistant Commissioner in the new Civil Commission, which was formed on the Annexation of the Punjab after the Second Sikh War.

For some time he continued to do exceedingly well and was in favor with the authorities. He with his corps, served with credit in the Hazara Expeditionary Force of 1852-53. He now lost, however, the support of his friend Sir Henry Lawrence, who was replaced by his brother John. The latter favored a somewhat different type of government.

It must be realized that Hodson's civil district, taken over from a very corrupt and inefficient Indian State, was no easy one to rule. Ordinary British Administrative methods were both unknown and unsuited to people who

"Hodson's Horse", a regiment of Indian Cavalry, perpetuates the memory of that brilliant British leader of irregular Cavalry during the Indian mutiny.

were past masters at every form of intrigue and roguery. The normal system of Justice based on legal evidence was not only too slow, but also it was not intended for a land where perjury was the normal practice of witnesses.

Hodson got into trouble for imprisoning by executive orders, a Pathan Khan,² accused of complicity in the murder of a British officer. This was one of those unsatisfactory cases where everyone knows what happened, and where proper legal evidence is difficult to obtain. The fact that this accused person was subsequently acquitted by a Civil Court is no proof that he did not commit the offense for which Hodson imprisoned him. Nobody, with experience of the then prevailing conditions, would necessarily judge Hodson's action as tyrannical or even inadvisable, but the Governor General decided that in this particular case Hodson suffered from lack of judgment and removed him from his appointment. He was reverted to regimental duty with the Bengal Fusiliers.

Hodson's troubles did not end here. He was also accused of irregularity in connection with regimental funds and accounts. This charge, after being investigated by two Courts of Enquiry, was finally found to be "not proved."

Usually "there is no smoke without fire," but there are several facts which should not be forgotten when forming an opinion about Hodson's monetary transactions and administrative methods. In Indian districts there are always plenty of "respectable and highly placed scoundrels" anxious to bring charges against anyone in authority who is reputed to be out of favor. Also irregular corps, which have only one or two British officers, require ruling with an iron hand. Administration must be of the variety which will be termed "strong" or "arbitrary," according to the sympathies of the commentator.

In such corps there are always individuals who harbor grievances and feelings of revenge, on account of punishments which they have well merited.

The accounts of irregular corps were kept in the Arabic script by a native accountant. The method was complicated, and the exact auditing of such accounts, in a foreign character, was a task that few British officers were competent to carry out, even if their time had not been occupied with dozens of other problems of administration

¹i.e., by the British Political Resident.

²Chief of a frontier tribe or family.

incidental to the government of a civil district and the command of a military corps.

There can be no doubt that Hodson was careless in money matters, and that some of his transactions were difficult to explain; but the final court of Enquiry found that the accounts "were an honest and correct record . . . irregularly kept." This finding was pigeon-holed for a very considerable time.

It is probable that if Hodson had not made enemies amongst his own race, no enquiry would ever have been made; certainly his final acquittal would have been more speedy. He had, however, a brusque and haughty demeanor and a habit of outspoken criticism which offended many.

Hodson's fortunes now seemed ruined; a subordinate position in the regular infantry gave no scope to a man of his calibre. But, at this juncture, the breaking out of the Mutiny gave him a chance that he seized to acquire fame.

A daring ride, with despatches for the Commander-in-Chief, of one hundred and fifty miles in seventy-two hours, with a small escort of Jind state horsemen, through a country swarming with rebel cavalry, brought him to notice. He was ordered to raise first a squadron, then a regiment, and finally a force of two thousand irregular horse. He was also made head of the Intelligence service. It shows that Army Headquarters must have realized that this infantry subaltern in disgrace was a man of most unusual talents and have known of his influence with the martial races of the Punjab. It was unheard of that a subaltern of European infantry should be able, especially in such a time of emergency, by the magic of his name, to raise what amounted to a brigade of irregular horse.

Hodson's unfortunate facility for creating trouble for himself still continued in his new appointment. He shot, as a rebel, a man who had once lent him money. In those days rebels were being generally shot out of hand, but it would have been wiser if Hodson had got someone else to order this particular execution.

There is raised against him a general accusation of looting. That he did some looting is most probable; but he was not the only one who looted. He had perhaps greater opportunities than most people, and also more enemies. Envy and jealousy, combined with enmity, spread exaggerated reports about his doings. It is quite certain that if he had taken nothing himself, his irregular troopers would have appropriated anything that was available. Neither he nor anyone else, in the condition of affairs then prevailing, could have prevented some looting by these irregular horsemen.

Hodson and his troopers played a leading part in the operations which led to the capture of Delhi. He kept the army supplied with intelligence and, by showing the flag, discouraged waverers from joining the rebels. Lord Roberts in his *Forty-one Years in India*, speaks of how Hodson kept open the communications with the Punjab. The fall of Delhi saved the British Empire in India, and Hodson's part in it was not inconsiderable.

The shooting of the Moghal *shahzadas*,³ whom he captured after they had fled from Delhi, forms one of the charges of brutality most frequently brought against him. These men had surrendered without conditions. They deserved death many times over and could scarcely have escaped a legal sentence of death in any case.

For his memory, it would have been better if Hodson had deputed a regular firing party to do the deed. However, there was no leisure for reflection, and he would not have been excused, if the princes had escaped. Those who have not faced an angry Oriental mob in the narrow streets of an Eastern City lack the qualifications to pronounce judgment on what it was advisable to do in the circumstances with which Hodson was faced.

The shooting of these men and the way in which they were executed produced a moral effect on the people of Hindustan that it is hard to overestimate. The prestige of the descendants of Timur and Akbar, in spite of their inaptitude, had partially survived generations of obscurity and impotence as puppets, first of the Mahrattas and afterwards of the East India Company. The shooting of these *shahzadas* in the public street finally shattered all illusions about the sacredness of their persons and at the same time eliminated the heirs of a phantom throne.

Lord Roberts in his *Forty-one Years in India* mentions that "the shooting of the Princes seemed to the excited feelings of the Army but an act of justice," and says also, "there were some men, whose opinions were entitled to the greatest respect, who considered that the safety of the British force would have been endangered by the representatives of the House of Taimur, and that for this reason Hodson's act was justified." He adds "my own feeling on the subject was regret that such a brilliant soldier should have laid himself open to such adverse criticism."

After Delhi was taken, Hodson, with a detachment of his "Horse," accompanied a column detailed to relieve Agra and then move in the direction of Cawnpore. He eventually took part in the second relief of Lucknow. He was killed in the attack on the *Begum Kotbi*⁴ where he exposed himself with his usual gallantry. His enemies ascribe his death to his passion for looting, but a note in Lord Roberts's *Forty-one Years in India*, makes it clear that this is a *canard*.

He died a poor man. If the accusations about looting on a grand scale were well founded, it is remarkable that nothing was left at his death.

Lord Rosebery (in his *Napoleon*) says "there is one question that English people ask about great men," and this is whether they were "good men?" To describe Hodson as a "good man" would be inappropriate. The term suggests mediocrity in ambitions and opportunities. Lord Roberts writes "as a soldier I had a great admiration for him and, in common with the whole army, mourned his early death."

³Literally the sons of emperors.

⁴Literally The Ladies' Palace.

There will never be any agreement about Hodson's moral character. Everything depends on the standard by which he is judged.

Apart from the charges relating to incorrect accounts and looting, Hodson has been accused of being unjust and oppressive to the personnel of the Guides, with using abusive language to Indian officers, and personal violence to men in the ranks. It is quite possible that there is some foundation for these statements, but the fact that he was able to employ successfully methods impossible for the ordinary man only proves how well he understood the men with whom he had to deal. It should not be forgotten that his irregular horse was not recruited from rapscallions, but from men of family and property. The men in the ranks were yeomen and gentlemen of their own land. Whatever Hodson did or did not do, the best answer to the charge that his methods were oppressive and unjust to the men with whom he had to deal is provided by the way that the irregular horsemen of the North flocked to *his standard* at a time when the British Power was tottering on its throne. He was known to the Martial races throughout the Punjab. To his men he was a hero and a demigod. This applied not only to Hodson's Horse, but also to the "Guides." When the personnel of this unit again met him at Delhi, they demonstrated their devotion to him in a manner that left no doubt about their feelings towards him.

It is true that on occasion he was both cruel and callous; but misplaced sentimentality has in the East often been more responsible for injustice and hardship to the innocent than well placed severity tempted by a knowledge of human nature. Methods which to Europeans appear overbearing and oppressive are understood and admired by Orientals; and Hodson was dealing with Orientals.

Hodson's recklessness, fine swordsmanship and gallant leading, together with his inherent genius for war, in-

spired the confidence of all ranks and gave to the corps the spirit which still continues. "Hodson's Horse" remains one of the finest regiments of the Indian Cavalry and earned distinction both in France and Palestine.

Within modern times there were still living old Indian officers who spoke, with bated breath of Hodson *Sabib Bahadur*.⁵ This is what the old King of Delhi called him—it indicates a place in their esteem above that which any mere military rank or title could give. Sir Mortimer Durand puts in verse the words of an old Sikh soldier:

"I rode to Delhi with Hodson: there were three of my father's sons,

I followed him when the first two fell: he was cruel and hard, they said:

The men were sobbing around me the day that they saw him dead.

It is not soft words that a soldier wants; we know what he was in the fight,

And we love the man that can lead us, ay, though his face be white."

Amongst the British race, whatever may be the opinion about his moral character, he is honored amongst the heroes who saved British rule in India when it was threatened by the Mutiny. His ability as a light cavalry leader is universally admitted, and this talent is the more remarkable in that he was entirely self-taught. He was guided in cavalry work by only his own genius. He never commanded a large force of cavalry in a general action, but he was what Napoleon termed "a true General of advanced posts."

At the time of his death he held only the military rank of Captain and Brevet Major. But to posterity, as Hodson *Sabib Bahadur*, he ranks with those great soldiers whose fame is ever kept green by the living regiments which are proud to bear their names.

⁵*Bahadur* is an Indian honorific which is impossible to literally translate. It is applied to distinguished men.



Colonel R. Potter Campbell, M. I. Res., and Officers of the Montclair Mounted Troop

Courtesy "The Rider and Driver"

MODERN CAVALRY: A Discussion of Employment, Troop Leading, Organization, and Training*

By G. BRANDT

Generalleutnant, German Army, Retired; formerly Inspector-General of Cavalry.
Translated from the German by F. W. MERTEN.

(Continued from the January-February number)

V. ORGANIZATION

WHEREAS in the foregoing we have shown what performances may be expected of modern cavalry if judiciously employed and well led, we shall now discuss how this arm should be organized in order to be capable of satisfying the greatest demands that may be made upon it in time of war. This goal: namely, to strive for the highest degree of efficiency, must run right through the organization of this arm in all its ramifications.

We have observed that practically every problem confronting cavalry in time of war is conditioned upon the employment of large forces. This, in turn, necessitates the utmost economy of force in the execution of any minor task where cavalry cannot be dispensed with altogether. From this, then, arises the tendency to organize the greater part of the mounted forces as army cavalry and only the smaller part as division cavalry.

A special chapter will be devoted to division cavalry. It is for this reason that in the following discussion we shall deal with army cavalry exclusively.

By accepting that the greater part of one's cavalry should be classified as army cavalry and therefore be formed in large units, one must understand clearly under what conditions modern army cavalry operates and fights, in order to decide what form of organization best answers the requirements of this arm.

Essentially, the army cavalry of most nations has retained its pre-war organization. This fact finds its explanation solely in tradition and inertia, as well as the difficulties that beset any kind of reorganization. Hence, conservatism has prevailed, the vast changes in the conditions under which modern cavalry has to fight notwithstanding. Before the World War, it was believed that considerable could be accomplished with the aid of mounted charges on a large scale; it was with this object in mind that the cavalry had generally been organized. Now it is realized that the cavalry's principal method of fighting consists in dismounted action, and yet its old organization is being retained.

The organization and types of cavalry in former days were such as to render the mounted arm capable of form-

The decisive factor to be considered in the organization of Cavalry must no longer be its drill technique, but rather its employment in the fire fight.

ing line for the attack from any formation. This required small wieldy sub-units which could be controlled by the voice of one man. Many years of experience had taught that the regiment consisting of four squadrons constituted the most suitable unit for this purpose. If the regiment had exceeded that strength, the maneuvering of cavalry divisions would have necessitated breaking up the regiments for the purpose of forming the various lines. This, in turn, would have entailed many disadvantages.

Practical experience, furthermore, had proved that the cavalry division, consisting of six regiments, corresponded best to all of the demands that had to be made upon the various evolutions of the cavalry divisions. Inasmuch as primary importance was attached to the mounted charge rather than to dismounted action, one felt justified in putting up with the disadvantage of the individual cavalry regiment's being too weak for independent missions by fire action. Dismounted, the regiment at best numbered only from 280 to 300 riflemen.

The changes that have been experienced in cavalry tactics now cause other needs to come to the fore. A modern regiment must possess a high degree of fire power. The drill evolutions, which were to make it possible to shift the mounted regiment from one position to another within the division, no longer play a decisive rôle. Hence, there is no reason for continuing to maintain the weak regiment of four squadrons. The decisive factor to be considered in the organization of cavalry must no longer be its drill technique, but rather its employment in the fire fight. The individual war-strength squadron, therefore, can hardly be increased beyond its present strength. Numbering 200 men and as many horses, the war-strength squadron has reached a strength which cannot very well be increased without incurring the danger

**Moderne Kavallerie*, published by E. S. Mittler & Sohn, Berlin. American translation rights owned by the United States Cavalry Association.

of interfering with its problems of supply and administration.

The fire power of the squadron has been materially increased by equipping every squadron with light machine guns. In the French army, each squadron has at its disposal 12 light machine guns. Yet, when dismounted, the individual squadron numbers fewer riflemen than a company of infantry.

The only way to increase the fire power of the regiment, therefore, is to augment the number of the squadrons. The argument that such a large regiment would be too unwieldy and too difficult to command cannot be sustained. It is a common experience that in time of peace the demands for great mobility are apt to overshadow those for shock and fire power. Likewise, the difficulties of command are easily overestimated in peace time. In war, however, hardly any commander has ever complained of possessing too many troops; on the contrary, on many occasions he probably has wished for a still greater number of men under his command. At any rate, it is scarcely conceivable that he should ever have entertained the thought of being incapable of commanding a larger force.

During the last stages of the war we* had too many staffs and not enough troops. We failed to exploit fully the working capacity of the staffs. The latter, moreover, deprived the line of the best officers. We, in particular, who are restricted to a fixed number of officers by the Treaty of Versailles, should strive to economize in staff officers. This would require the various staffs to be organized in such a manner that they could function without having to draw on the troops for additional personnel.

One can hardly be accused of exaggeration in asserting that a commander who is incapable of leading six squadrons and a strong machine gun squadron will also be unable to command a regiment of only four squadrons.

If it be agreed that a regiment, consisting of four squadrons and a machine gun squadron, is too weak independently to execute the fire fight with its multifarious problems, it is but logical that the number of its squadrons must be raised.

It, then, remains to be considered how many regiments should compose a cavalry division. In view of the fact that the strength of the regiment is still unsettled, we are confronted with the question as to how many squadrons a cavalry division really needs.

Verdy du Vernois, in his book entitled *Troop Leading*, has this to say: "24 squadrons must be regarded as the maximum strength of a cavalry division; only commanders endowed with the most outstanding talents—provided their subordinate commanders, as well as their troops, are thoroughly trained—will be capable of commanding in action a division exceeding this numerical strength." This may have held true with respect to the pre-war era, although there were a number of cavalymen who even then regarded the fighting power of 24 squad-

rons as inadequate. General v. Bernhardt, for instance, made the following remark as early as 1899: "I think, therefore, that, if we give the matter unprejudiced consideration, we must come to the conclusion that our division as now organized, constituting, as it does, the largest independent tactical unit, will be too weak for the many and most decisive operations it will be called upon to undertake." General v. Bernhardt demanded that the cavalry division should consist of three brigades of three regiments each, that is, 36 squadrons; he believed that it would be quite feasible to command such a large cavalry force, despite the fact that conditions then were far more difficult than they are today.

An infantry division going into action is usually present in full strength. Only in rare circumstances will any of its elements be detached on some special mission. With regard to a cavalry division, however, conditions are different, especially when the division is engaged in the execution of its most important mission which demands of it to operate independently against the hostile flank and rear. After deducting the elements needed for reconnaissance and security of the exposed flanks, the actual fighting strength will be considerably reduced. In a study which recently appeared in the *Revue de Cavalerie*, an independently operating cavalry division had assigned ten squadrons to missions of reconnaissance and security, so that of its 16 squadrons there remained only six, besides a regiment of *portés* dragoons to execute the decisive attack. Moreover, before going into action the regiment of dragoons first had to detruck and cover four miles on foot in order to reach the line of departure for the attack. "What of the surprise effect, the prerequisite for all cavalry operations?"—asks the French author.

First of all, 16 squadrons must be regarded as insufficient to carry out the tasks confronting a cavalry division. Cyclists and motorized infantry are no substitute for the missing squadrons. It may be that, in view of the short term of service prevailing in the French army, the French find it more difficult to train cavalry to its highest state of efficiency than motorized infantry. Such an expedient, however, should be resorted to only in case of emergency; at the same time, it must always be borne in mind that mounted regiments can be employed more extensively than infantry in trucks.

The main body of a cavalry division should be composed of mounted troops. The fact that, in addition to France, the armies of several other countries have espoused a different trend, must be attributed to the peculiarities of their geographical situation, frontiers and probable theatres of operations. It is, of course, impossible to put into effect any proposal for the creation of an ideal cavalry organization without encountering obstacles and friction which may not be entirely unjustified. Nevertheless, it is well worth the effort to test such proposals, for they furnish food for thought and may bear fruit later on.

Whereas, on the one hand, it may be said that 16 squadrons are inadequate for a cavalry division, one may, on the other hand, regard 36 squadrons as the maximum

*Germany. Tr.

strength for such a unit. Assuming that the fighting power of a squadron of cavalry compares favorably with that of a company of infantry, a cavalry division would possess practically the same fire power, with regard to rifles and machine guns, as an infantry division. What strength the several nations actually are able to give their cavalry divisions depends in the end upon the number of squadrons that are available. For this reason, we shall discuss merely the principles of organization at this time. Believing that the maximum strength of a cavalry division should not exceed 36 squadrons, one may, on the other hand, regard 24 squadrons as the minimum strength. The fact that the cavalry divisions of many armies are actually below that number should not change such an opinion. It is probable that, in addition to the reasons given above, available appropriations have played a considerable part in deciding on the organization. Consequently, a compromise was necessary; although there was a desire to create many large cavalry units, yet the available financial means fixed the limit that could be reached. A compromise, however, can never lead to an ideal solution. Hence, the organization of the cavalry, as it exists in foreign countries, ought not to be regarded by us forthwith as an example worthy of imitation.

In appreciation of the fact that cavalry can successfully execute its missions only if it possesses great fire power, it is now armed with machine guns. Here, too, the French have gone furthest, in that they have assigned 12 light machine guns to each squadron. Because of the presence of so many machine guns, the number of men available for patrolling is, of course, greatly reduced, although patrols are frequently armed with such weapons.

The light machine gun must be carried on the gunner's saddle in order to be ready for action at any time. Yet, for many purposes, particularly for delaying action in which cavalry frequently will have to engage, the range of the light machine gun is too short; consequently, use is made also of heavy machine guns which possess a longer range and are capable of sustained fire action. In most countries separate machine gun squadrons have been organized for the employment of this weapon, which is carried either on vehicles or pack animals. There are a great many situations, however, in which it will be impracticable for cavalry to use the heavy machine guns carried on carts. Then, too, the cart represents too large a target, is not sufficiently mobile, and cannot show itself in the forward zone of action. Guns thus transported must, therefore, be supplemented by less vulnerable ones carried on pack horses. Finally, it remains to be decided whether to organize a separate machine gun unit in which the weapon is carried on pack animals, or to attach two or three such guns to each rifle squadron. Since in modern warfare a squadron can hardly dispense with heavy machine guns, the latter solution is to be preferred. It will not only render unnecessary an undesirable division and dissipation of the machine gun squadron as such but will also eliminate the necessity of organizing a new unit. The squadron itself will learn better to cooperate closely

with the machine guns and derive greater benefit from them, if they constitute a part of the squadron, than if they are attached to it only when required by the situation. If the development of the light machine guns should ever reach a stage where their effect approximates that of the heavy machine guns, one could, of course, dispense entirely with the heavy machine guns carried on pack animals. But in addition to the heavy machine guns, a cavalry regiment must also possess firearms of a still heavier caliber. In armies not subjected to any armament restrictions, we find, therefore, field guns and anti-tank cannon. Whereas the necessity for such guns need not be argued, opinions may differ with regard to the number of guns which a regiment needs. Justified as the desire may be to furnish the regiment with as many of these weapons as possible, it meets with the objection that it might cause the regiment to be encumbered with too many vehicles and thus considerably reduce its mobility. These super-heavy guns must be transported on wheels. Carried on pack animals, they would be able to move at a walk only. Nations not restricted as to armament, therefore, will mechanize them in the main.

To take these guns from the regiment and as a separate unit place them at the immediate disposal of the cavalry brigade or division, does not seem practical. The regiment needs these weapons on the march as well as in combat and, for that reason, should have constant access to them. Even if these guns were organized as a separate unit, it would eventually become necessary to distribute them among the regiments. For these reasons, it seems to be more appropriate to make them a component part of the regiment.

Modernly armed nations in general have decided on two or three field guns per regiment. The number of anti-tank weapons varies between two and four, consisting either of small-caliber cannon or super-heavy machine guns. From two to three field guns per regiment should be sufficient. With regard to anti-tank weapons, however, four should be the minimum; but whenever the regiment marches some distance away from the main body of the division, four anti-tank weapons do not furnish adequate protection. Considering the fact that the road space of one single cavalry regiment, including security distances, measures four miles and more, one will readily agree that four anti-tank weapons are not enough. In order to render the regiment self-sustaining in combat, its super-heavy weapons, therefore, must be reinforced by elements of a special division unit. A force equipped with armored cars possesses the best anti-tank weapon. Further below we shall discuss the latter in greater detail.

Against attacks from the air, the light and heavy machine guns alone are not able to furnish adequate protection. Being without an air force, the German army lacks practical experience in the defense against aircraft. Several other nations have assigned three super-heavy machine guns to each cavalry regiment. This number seems to constitute the minimum needed by a regiment.

Of the heavy machine gun it must be required that

it can be employed against aircraft on the march without first having to be removed from the vehicle on which it is carried. Also, combat trains must carry machine guns as a protection against aircraft.

The means of signal communication of the regiment are consolidated in the communication platoon. In allotting means of signal communication to the regiments, it is justifiable to restrict the latter deliberately in this respect in favor of a highly efficient communication system maintained by the division signal squadron. For reasons of insuring strict radio discipline, it seems best—rather than to assign the several radio sections to the various regiments—to organize them as a division unit and to attach them to the regiments as needed. Thus, the greatest possible utilization of the available personnel and matériel is guaranteed.

Since cavalry on many occasions will have to march off the main roads and perform all sorts of duties incident to road repairs and demolitions, it is necessary to assign to each regiment an engineer detachment. The great number of vehicles constituting the regimental train often necessitates reconstruction of small bridges that have been destroyed or are in damaged condition; again, it may be necessary to construct passages over small ditches, which cannot otherwise be negotiated. In the past troops were able to take advantage of existing roads to a greater extent than future warfare will ever permit; hence, troops must learn again to advance off the roads. In the armies of Frederic the Great and of Napoleon I, a section of carpenters, equipped with material to build small crossings, always marched at the head of every regiment. Today this practice again has come into use. A pioneer and demolition squad, composed of approximately ten men and a vehicle for the necessary material, is sufficient for a regiment.

Furthermore, it is necessary to organize, as part of the regiment, a strong cyclist platoon. Within the closer confines of the regimental zone, there will be found a good many duties of which the cyclists may very well relieve the squadrons. Hence the cyclist platoon is intended to constitute an auxiliary special unit rather than a combat organization.

The regiment finally needs from two to three automobiles and several motorcycles. Owing to the great spaces involved and the fact that the effect of the weapons in the hands of the regiment has been the cause for a considerable increase in the distances between its various elements, it is no longer possible to insure a speedy transmission of messages by horsemen alone.

From the foregoing we conclude that the organization for a modern cavalry regiment should be as follows:

Regimental headquarters;

- 6 rifle squadrons, each including from 6 to 12 light machine guns and from 2 to 3 heavy machine guns;
- 1 heavy machine gun squadron with vehicles;
- 1 communication platoon;
- 2 field guns;

- 4 anti-tank guns;
- 3 super-heavy antiaircraft machine guns;
- 1 cyclist platoon;
- 1 pioneer and demolition squad;
- 5 motorcycles;
- 2 or 3 motor cars.

Whether the cavalry division should be organized with three cavalry brigades of two regiments each or with two cavalry brigades of three regiments each does not seem to be of vital importance. Both solutions have their advantages and disadvantages; it will depend upon the number of staffs available which of these two solutions is to be chosen. That one form should be superior to the other, however, can hardly be established.

Before passing to the other component parts of the cavalry division, we shall refer once more to the trains, armament, personnel, and horse material.

All animal-drawn transportation must be capable of keeping up with the movements of the cavalry; four-horse teams, therefore, are absolutely necessary. The number of vehicles is less important than the requirement that they should be light and mobile. They must be able to accompany the troops at a trot even on poor roads. Field trains and part of the combat trains can be motorized. The motorization of the other vehicles, however, is subject to the restriction that they must be able to maneuver over any kind of terrain. When such transportation has been developed, it will be possible to motorize the trains still further. That some of these vehicles must be equipped with machine guns for antiaircraft defense has already been stated.

The armament of cavalry must keep abreast of that of the infantry. Whatever arms the infantry uses in combat are also needed by the mounted forces. Disregarding certain minor deviations rendered necessary by the circumstance that the trooper is accompanied by his mount, the rifle, side arm and machine gun, both light and heavy, must, therefore, be the same as the weapons the infantry uses.

It is still a moot question whether the saber is dispensable and whether it should be replaced by the pistol. The cavalryman requires a weapon which he can wield while mounted. Although cavalry charges on a large scale are now a thing of the past, individual groups and even platoons, nevertheless, will find more often opportunities for a mounted charge than one is wont to believe. In former days, when the squadron attacked in close-order formation, the use of the pistol was limited to exceptional cases, owing to the hazard it implied to one's own troops. Since tactics have changed, however, so that mounted charges are carried out only by small units and in some sort of an extended order formation*, this limitation no longer obtains. The pistol, therefore, could easily supplant the saber, provided a large caliber model were introduced possessing a range sufficiently great to cover the adversary from the very beginning of the charge.

*Line of foragers. Tr.

To date, however, no such pistol has as yet been adopted, and the saber, therefore, can not be discarded.

Another question is that of the rifle grenade. Whenever the opposing firing lines are so close to each other that the friendly artillery can no longer participate in the action, the advantage will be with him who carries rifle grenades. One should not fail to exploit this advantage. Particular attention is directed in this connection to the great psychological effect of the rifle grenade.

The problem of reducing the weight of the pack plays as important a part in the cavalry as it does in the infantry. Efforts are constantly made to save ounce for ounce on equipment and armament in order to effect a weight reduction; and yet no satisfactory results are obtained. Again and again it is proved that for combat the trooper needs a number of things which must constantly be in his possession and cannot be issued to him just prior to going into action. As early as 1858, Moltke made the following observation with regard to this question: "Speaking of cavalry, the weight reduction should be sought less in the pack than in the man himself. It goes without saying that there is a considerable difference whether the horse, in addition to the pack, carries a rider weighing 155 pounds or one of 220. Not only will the horse move faster in action under a light rider, but besides he will arrive at the scene of combat with his strength preserved and in good condition. The term 'Heavy Cavalry' is a self-contradictory term. It is no paradox, therefore, to maintain that particularly men of small stature should be recruited for the cavalry, whereas the biggest and strongest men should be enlisted for the artillery, where they can be used to best advantage. Even the infantry needs the latter type more than the cavalry." And so we hear the patent solution expressed more than seventy years ago. Even the most liberal weight reduction of the pack will not be able to compete with number of pounds that can easily be saved in the weight of the rider. Consequently, only men of from five feet three inches to five feet seven inches in height and not exceeding 145 pounds in weight should be accepted for service in the cavalry.

As a cavalry mount, the East-Prussian horse, being of medium height, deep-chested and of superior breeding, has proved particularly suitable. Width and length in a horse are more important than height. In the course of long marches, in which modern cavalry will be required to engage, it has been found that the horse of superior breeding has the advantage over the one of an inferior strain. There exists a common but erroneous belief to the effect that it is the frame of the horse's body which carries the weight of the rider. On the contrary, the weight is carried by the superior strain which is combined with a larger heart and greater density and firmness of both bones and muscles. Unfortunately, the height of the horse is often reached at the price of its breeding. Not only is the general performance of horses of inferior breeding less than that of horses of a superior strain, but they also consume more feed than the latter.

We shall now turn to the special units which a cavalry division requires in addition to its horsed regiments.

In deciding what and how many weapons to assign to the special troops of a cavalry division, it will be necessary briefly to review once more the method of procedure which a cavalry division follows in combat. One will find that the principles upon which the assignment of weapons was formerly based have changed considerably since.

During the advance cavalry requires for the support of its reconnaissance elements heavy as well as light and speedy armored cars. These vehicles must carry an adequate armament so as to be capable of successfully engaging hostile armored cars. Since cavalry will only on rare occasions have an opportunity to observe the situation in rear of the enemy's front, the air corps must be relied upon to supplement the ground reconnaissance of the mounted forces. Upon leaving the roads, cavalry will require the services of engineer troops possessing a high degree of mobility in any kind of terrain. For the cavalry might have to cross broad water courses, perform major repair of bridges, etc., and demolish structures of considerable size, all of which missions are beyond the capacity of the regimental pioneer and demolition squads. Furthermore, a bridge train is needed for the crossing of rivers. Finally, there is needed a signal squadron for the maintenance of communications between the various reconnaissance elements and the division staff, between the component units of the division and its headquarters, to adjoining troops, and to higher headquarters.

When combat begins, cavalry must have strong artillery support. In view of the fact that the regiments can never be committed to action at full strength, because certain elements are required for missions of reconnaissance and security, it will be necessary to supplement the fire power of the cavalry division by infantry. Inasmuch as this infantry must be highly mobile, it will have to be carried in trucks or mounted on motorcycles or bicycles. For the defense against hostile armored cars, the cavalry division should contain a special unit of anti-tank guns, in addition to the small number of anti-tank weapons carried by the modern cavalry regiment. Armored cars should be employed where the main effort is to be made. The cavalry division must be able to protect itself from aerial attacks and, therefore, needs a special unit of antiaircraft guns. The care of the wounded requires a mobile medical detachment. Provision must likewise be made for the care of the sick and wounded animals. Besides, prisoners will have to be evacuated; and depots in rear of the division must be guarded. In order not to curtail the strength of the combat forces by the necessity of such detachments, the division should have at its disposal one or two strong reserve squadrons. Finally, trains are required to carry the division supplies.

Cavalry combat no longer consists in a brief attack on a large scale but rather resembles that of an infantry division. It is, therefore, just and proper that the cavalry division, in proportion to its strength, should be equipped

with all the weapons that are possessed by the infantry division. Infantry cannot fight a battle alone but needs the support of auxiliary weapons, which are equally indispensable for modern cavalry.

In this respect we still adhere far too much to antiquated viewpoints and have failed sufficiently to appreciate the fact that the nature of cavalry combat has undergone a complete change since the late war. Moltke, even after the campaign of 1866, still regarded one battery of horse artillery as adequate for a cavalry division. Also General Kraft Prince Hohenlohe, in his famous letters on cavalry, writes in a similar strain on the allotment of artillery: "The cavalry, taking part in the great battle, has no use for horse artillery. At the beginning, the cavalry will occupy a reserve position. Yet when it is ordered to attack, it does so in order to exploit the propitious moment in which to descend upon an enemy already shaken. In that event, it is no longer a question of further disrupting the enemy lines by means of artillery fire, for there will be no time for that. Thus, unless the horse artillery of the cavalry division has already participated in the fire action of the other batteries, it will merely play the part of the idle spectator." Furthermore, Verdy du Vernois states: "For the battle itself, a permanent assignment of artillery to a cavalry division is not required; on the contrary, this might easily lead to a needless withdrawal of a number of guns from the important artillery duel. If, on the other hand, a large force of cavalry is employed in the operation, it will doubtless require the support of several guns in a great many instances."

What formerly held true, however, no longer applies today. Unconsciously we have clung to the now obsolete viewpoints of former days; for only in this manner can we explain the general trend of equipping a cavalry division with so much less artillery than an infantry division. What reasons, then, might possibly be offered today for this obvious discrimination? The different fighting methods of infantry and cavalry, perhaps? Such a reason no longer applies, as we have observed. Or is it that the long artillery columns might interfere with the mobility of the cavalry and thus constitute a ball and chain, so to speak? If one or two battalions of horse artillery are able to keep up with the cavalry, six battalions will likewise be able to do so. Moreover, there is the motor. Germany's armament is restricted; for this reason she cannot increase the artillery of her cavalry divisions even though the necessity for it is recognized. Yet the other nations, which are free to arm and maintain a large artillery force, have also equipped their cavalry divisions with artillery that is wholly insufficient. The danger that an attack without adequate artillery support is bound to fail is stressed at the service schools; and yet this precept is not applied to cavalry.

An independent operation of the army cavalry against the flank of an army, executed without sufficient artillery support, can not have any decisive effect. Hence, it is imperative to provide the cavalry division, in proportion to its actual strength, with the same amount of artillery

as an infantry division. If it is not proposed to do that, then the aims to be attained through cavalry combat must be reduced. An infantry division going into action as a rule has its entire artillery at hand; whereas in the case of a cavalry division some artillery elements usually accompany detachments sent out on special missions. Theoretically speaking, therefore, the cavalry division ought to have a greater amount of artillery assigned to it than the infantry division.

Besides the field guns, cavalry requires a number of light field-howitzer batteries. Because of their high-angle fire, these batteries require a less careful selection of firing positions and, therefore, can go into action much faster than ordinary light batteries. Owing to the rapid movements of the cavalry, the horse artillery is placed well forward in the march column; hence, it usually goes into action without wasting any time in looking for ideal firing positions, because its fire effect would otherwise come too late. It is for this reason that the light field-howitzers are particularly suited for this purpose.

In addition to field guns and light field-howitzers, however, cavalry has particular need for long-range artillery with which to reach far into the enemy's lines. There will be situations in which the cavalry can not approach the enemy near enough to make adequate use of its field gun. Long-range artillery in sufficient number is of vital importance in such contingencies. Since light field-howitzers will not always serve the purpose, they must be supplemented by heavy field-howitzers. Nor is cavalry less subject to attack from the air than any other arm; its need for a unit of anti-aircraft guns, therefore, is equally as important.

One cannot today conceive of cavalry going into action without sufficient artillery support. Both these arms must, therefore, form a combat team. This union, the mutual appreciation and whole-hearted coöperation, however, can be obtained only if the artillery allotted to the cavalry is assigned to the various cavalry divisions already in time of peace. On the experiences gained in the war of 1866, Moltke wrote as follows: "Owing to the fact that in peace-time the artillery is separated from the troops which are under the direct control of the several corps, I would point out that the commanders of mixed units come in contact with this arm only during the brief maneuver periods. The personnel and the true nature of the artillery thus remain more or less strangers to them. And so the artillery is treated as a secondary arm and quite frequently not given any orders at all. In a good many instances the artillery is not even afforded the necessary time to go into action, the blame for which is not to be laid at the door of this arm but at that of the higher command." The infantry has long heeded this lesson and incorporated its artillery in the infantry divisions, even in time of peace. The cavalry, on the other hand, has yet to take this step, although it is expected of it to value its artillery and employ it in the same manner as the infantry. In peace time the cavalry division is comprised only of its cavalry regiments. Could one apply the term "infantry division"

to an infantry organization consisting merely of three infantry regiments? Much remains yet to be done in the development of the cavalry division, if this organization is to be what it should be: namely, a large unit of mixed arms wherein cavalry predominates, just as infantry does in the infantry division.

It does not seem reasonable to believe that the difficulties entailed by assigning the artillery to the cavalry divisions in peace time should be so great as to be insuperable. As far as the soldier is concerned, obstacles that exist must be overcome; and where there is a will, there is a way.

The infantry elements which should be assigned to the cavalry division in order to increase its fire power must be rendered sufficiently mobile to enable them to keep up with the cavalry. The infantry, therefore, must either be mounted on bicycles or supplied with motor transport.

During the late war, cyclists did render the cavalry valuable services. Their advantages, as well as disadvantages, are sufficiently known and need not be discussed here. Yet, when organized into units exceeding the strength of a battalion, cyclists become unwieldy. Small cyclist detachments are far more manageable than large ones. Hence, in assigning such troops to the cavalry, one should not exceed the strength of a battalion. Schmettow's cavalry corps in Rumania included an entire cyclist brigade. The latter was confined mostly to the only available march route that was in good condition. When the roads became bad at the beginning of the rainy season, this brigade was compelled to leave its bicycles behind. In the end, the mud stuck so thickly to the wheels that they would not revolve at all and the bicycles had to be carried. As a cyclist unit, the brigade was thus eliminated.

Infantry mounted on motorcycles, naturally, acquires great speed. Judging, however, from the present stage of development in the technical field, the general characteristics of a motorcycle battalion lend themselves first and foremost to defensive missions. In offensive fighting, the riflemen will have to dismount from their motors and quite often leave them far behind, just like the bicycle units. Unlike the led horses of the cavalry, motorcycles cannot be brought up. This feature exerts a considerable influence on their subsequent employment after the fire action has been concluded. Placed into the hands of the division commander as a mobile reserve, however, a motorcycle battalion may be used to good advantage, thanks to its superior rate of march. To reconnaissance work, on the other hand, it is not so well suited; the noise of the motors, audible at a great distance, would interfere considerably.

Infantry transported in motor trucks is likewise restricted to the highways, unless the vehicles are equipped for cross-country traffic. This confinement to roads entails the disadvantage that a battalion in trucks is unable to avoid the effects of hostile fire by deploying. The battalion, therefore, in most instances has to detruck at a

comparatively early stage and cover considerable distances on foot before going into action. Cross-country motor vehicles would remedy this situation. If, in addition to this cross-country motor transport is protected by light armor, without sacrificing its mobility, it will greatly enhance its chances for employment. The movements of motorized infantry, for the time being, must needs be executed under the cover of cavalry.

The solution for the future may be sought in the organization of independent, motorized and partly mechanized infantry units which, like the former Jaeger battalions*, would be allotted to the army cavalry as needed. This constitutes the route which France has taken by organizing regiments of *portés* dragoons. Such highly mobile infantry units will furnish the cavalry divisions a very desirable reinforcement of their fire power, both in the defensive and offensive.

As long as the principal combatant component of a cavalry division consists of horsed troops, the command and employment of motorized infantry will meet with no excessive difficulties. In temporary situations, in which motorized infantry cannot participate, it makes little difference whether the infantry is left behind. Thanks to its high rate of march, the infantry can later be brought up rapidly; moreover, the cavalry itself possesses sufficient inherent strength to be capable of fighting without its infantry when occasion demands.

In the chapter entitled "Reconnaissance," the reader's attention was directed to the great difficulties which hostile armored cars are bound to create for the reconnoitering elements. So long as it is impossible to arm every group of horsemen with an anti-tank weapon, the weight of which does not exceed that of the light machine gun and which can be carried on the rider's mount, the cavalry will be in need, for the support of the reconnaissance elements, of a motorized unit which is capable of successfully engaging the hostile armored cars. There is nothing at present to indicate the construction in the near future of so light, and yet so effective, a weapon as referred to above. Any horse-drawn unit of anti-tank weapons, however, strong it might be, is and will always remain merely an expedient. Horse-drawn anti-tank guns are not mobile enough to enable them always to be present where they are needed.

The organization of this motorized unit, however, will not be taken under consideration here. Forbidden to use these weapons, the German army lacks practical experience in their employment. Discussions of this subject are based on the experiences of foreign armies and may be read in our military literature. Nor has the development of these weapons been conclusive. New types of vehicles are continually being tested; their improvement, in turn, subjects to constant change the opinions regarding their employment. If this trend should continue—namely, to obtain the speed and capacity for crossing any kind of terrain for the vehicles that are used in connection with

*Light infantry. Tr.

reconnaissance, at the sacrifice of armored protection—the prospects of the anti-tank weapons will increase.

In addition to the armored motorized unit necessary for the support of the reconnaissance elements, the cavalry division must have at its disposal also a special unit of anti-tank guns. This detachment may be used for a good many purposes. It is indispensable in combat at points where attacks of hostile armored cars are expected; nor is its importance any less when it is a question of supporting troops that have been assigned to special missions, as, for instance, flank protection, blocking of an extended zone, and so forth. This weapon should be motorized in order to be capable of quickly being shifted from one location to another. It must, furthermore, be constructed in such a manner that it can be fired from the wheeled carriage, or off the carriage, in order to take advantage of cover.

Reconnaissance must be supplemented by aerial observation. Yet, airplanes are also needed for the cavalry battle. We can hardly stage nowadays a successful artillery action without the artillery being assisted by aerial reconnaissance and observation. Then, too, in many situations communication with elements that have become separated can be maintained only with the aid of the air service. More so than with any other arm, is mutual coöperation between cavalry and air service necessary. The cavalry division, therefore, can not dispense with an air force of its own any more than the infantry division. Coöperation between cavalry and air service, however, will not be discussed here any further. This subject is treated in detail in foreign military publications. Lacking practical experience, Germany finds the study of foreign literature with regard to this subject particularly instructive.

The entire communication system of the cavalry division should be centralized in the signal squadron. Whereas the immediate needs for signal communication of the regiment are looked after by the regimental communication platoon, the signal squadron is charged principally with the maintenance of radio communication. In view of the practice having as object interference with, and interception of, the opponent's radio communications, which has been adopted by all foreign countries, the maintenance of strict organization and discipline within this service is mandatory. Unexpectedly employed, radio communication is more harmful than beneficial. Hence, it is essential to employ and constantly control it by means of a division agency. The signal squadron should be equipped with the greatest practicable number of field radio communication sets transported on pack animals. For motorized and horse-drawn radio sets will interfere with the mobility of the reconnaissance elements and, moreover, require strong protection.

A suitable arrangement would be in peace time to concentrate the signal squadron of all cavalry divisions in a separate detachment. This would insure greater uniformity in training. Also, the further development of the

cavalry communication system could only gain by a centralization of this kind in time of peace.

The regimental pioneer and demolition squads do not suffice to execute all demolition or reconstruction missions. For this purpose, the cavalry division requires a separate engineer unit. These engineers must be rendered so mobile as to be able to follow the cavalry in any kind of terrain. Although part of them may be transported on bicycles and trucks, some of them will have to be mounted on horses. For there are situations in which neither bicycles nor motor trucks can be used. In this connection one must deliberately put up with the disadvantage resulting from the necessity of mounted engineers devoting much time to the care of their animals, which naturally is bound to interfere with the engineer training of these mounted men to a certain extent. And yet, a less thoroughly trained engineer soldier, but one who is able quickly to arrive at his place of duty, is still better than he who has been trained in engineering to perfection, but who, because of his lack of mobility, reaches his post too late, or not at all.

Since an entire battalion is regarded as necessary for an infantry division, a squadron of engineer troops, then, constitutes the minimum requirement of a cavalry division. Moreover, this minimum will suffice only provided the regiments on their part possess well-trained pioneer and demolition squads, so that the engineer squadron will not be called upon to attach any of its personnel to the regiments.

The principal duties of engineer units attached to cavalry consist in the construction of crossings over otherwise impassable obstructions in the terrain; the ferrying of troops across, and the bridging of, wide water courses; the erection of road barricades; and the execution of demolitions. The necessary material for crossing small streams or for minor demolitions, on the other hand, must be carried by the regimental pioneer and demolition squad. Inasmuch as this material will not always suffice, the squad must be trained also to construct small emergency bridges from material locally procured.

For the construction of river crossings, the engineer squadron requires a bridge train. The latter should be motorized, so that it can be quickly moved forward to wherever it is needed. Horse-drawn vehicles fail to measure up to the enormous march requirements incident to the transportation of bridge material. Since, however, the last few miles leading to the crossing point will frequently be impassable for motorized transportation, the bridge material should be so constructed that it can also be temporarily loaded on ordinary wagons.

Engineer squadrons ought to be organized in peace time. Furthermore, the regimental pioneer and demolition squad should be attached to them for training. The same reasons which speak in favor of a centralization of all signal squadrons apply likewise to the engineer squadrons. The duties of the engineer units with the cavalry divisions in many respects differ considerably from those of the engineer battalions of the infantry divisions. Since

there exists no higher technical office devoted exclusively to the problems of the mounted engineer troops, the further development of this branch of the service is greatly handicapped. Experiences that may be utilized to stimulate progress cannot be gathered, however, by merely organizing temporarily an engineer squadron for a few days. On the contrary, in order to derive any benefit, a standard peace time organization is required. Besides, a good engineer squadron can be improvised still less than a cavalry squadron. One cannot help but feel that, in general, the importance of engineers for army cavalry is greatly underrated. More so than in former days, cavalry will have to extend and move forward in several zones of advance; moreover, the number of its vehicles has been augmented. Even a small ditch can cause considerable work for the engineers and impede the forward movement. Yet, a far-sighted peace organization and training will greatly reduce these difficulties. The American cavalry division, as now organized, includes a mounted engineer squadron consisting of three troops.

The care of the sick and wounded requires a cavalry medical unit, similar to the one of the infantry division. In view of the circumstance that the fighting frequently extends over a wide area, this medical unit must be so organized that it is highly mobile and lends itself to being split up into several small detachments. The medical unit should, moreover, include a number of mounted patrols to carry on medical reconnaissance in the extended zone of action.

Organized along similar lines, a cavalry veterinary unit must provide for the care of the wounded and otherwise incapacitated animals.

During the World War several cavalry divisions, operating on the Eastern Front, were reinforced by a Landsturm squadron each; the latter performed all necessary labor in the rear area, thereby contributing to the maintenance of the combat strength of the regiments. This measure proved of great value. Cavalry tactics, as formerly employed, usually resulted in a greater number of casualties among the horses than among the personnel. In future, however, we must anticipate the reverse. The case might occur in which a regiment is temporarily wiped out, because great losses among its personnel will compel it to use the remaining men for the care of the animals of the dead and wounded. In a situation of this kind, the Landsturm squadrons could relieve the regiments of all supernumerary animals until the losses of the regiments had been replaced.

The demands which must be made upon the organization of a modern cavalry division will lead to the creation of a unit differing considerably from the pre-war cavalry division. An unbiased examination of the conditions under which modern army cavalry operates, reconnaissance and fights, will prove the justification of the requirements enumerated above. It has been mentioned before that the limited means available in time of peace will rarely suffice to meet all of the cavalry's demands, however justified and absolutely necessary they may be.

The cavalry, therefore, will readily appreciate the justification of all limitations in so far as they are due to general conditions. It would not understand, however, any preference that might be exhibited toward the demands of the other major unit of mixed arms, that is, the infantry division. The modern cavalry division is not what it used to be. Formerly it constituted a unit of almost exclusively mounted troops. Today, however, it constitutes a mixed unit of all arms, differing from the infantry division only in its greater mobility and speed, as well as a greater number of horses. Several nations, accordingly, have changed the name "cavalry division" to "light division," thus placing the cavalry division on an equal footing with the infantry division. Yet, as long as the greater part of the combat strength of a cavalry division consists of mounted troops, one may well retain the old designation of "cavalry division."

Inasmuch as all missions of army cavalry exercise a powerful influence towards mass employment, one cannot regard the cavalry division as constituting the largest major unit within the cavalry. The cavalry divisions should, therefore, be organized into cavalry corps; whereas a cavalry division should be employed individually only in an extreme emergency. In this regard, too, we still cling to old-fashioned conceptions.

The number of cavalry regiments has been reduced in every country. Although it was possible in former days to allot some army cavalry to each army, this cannot be done in future lest the fatal error of dispersing one's forces be repeated. The armies henceforth must make the best of a situation wherein only one or neither of their flanks are covered by army cavalry.

These altered conceptions should, moreover, be given due consideration when formulating plans for war games and maneuvers. During major war games it will frequently be necessary for the various cavalry divisions to make long marches for the purpose of concentration as a preliminary to the organization of a cavalry corps. This feature tends to create erroneous impressions regarding the employment of cavalry. It stands to reason that the horses, as a rule, will be worn out before the cavalry corps is ready to embark upon its mission. If, on the other hand, the concentration of several cavalry corps were provided for from the very beginning of the campaign, these corps would generally be enabled to enter upon their missions under more favorable conditions. When Moltke, after the campaign of 1866, in his well-known memoir proposed that cavalry corps should be organized only when needed, King William in a marginal note had this to say: "This means, then, that cavalry corps under separate command are to be organized only for some particular occasion. Will there always be time to do so; and, moreover, will the various regiments always be available?"

While the necessity of massing troops for the main effort is taught both in tactics and strategy, it constitutes, with regard to army cavalry, the prerequisite for every tactical and strategic success. This requires, of course, that other parts of the front be entirely denuded of cavalry.

There being only a limited amount of army cavalry available, such denudation is absolutely imperative. It must indeed be very difficult for the average commander to appreciate this necessity and act accordingly; for otherwise this rule would not have been violated quite so often in the past. Yet, in connection with this requisite, Goethe's words may aptly be quoted: "Restraint alone does stamp the master."

The problem of subsisting and commanding several cavalry divisions combined into a cavalry corps has been treated by General v. Bernhardt in his book entitled *Cavalry in Future Wars*. If it was possible to feed large cavalry masses in the wars of Frederic the Great and Napoleon I, so General v. Bernhardt states, this should be much more feasible now considering modern means of transportation, provided proper arrangements are made beforehand. If the commander of a cavalry corps were to lead his divisions as the commander of an infantry corps handles his by employing first one division and then, according to circumstances, reinforcing it, or prolonging the front by bringing up the second one, or by employing the divisions side by side, assigning to each a definite zone of action and mission, there should be no reason why commanding a cavalry corps would not prove perfectly practicable. The General continues by saying that one may safely assert that the result would be all the more certain of achievement, the more the final responsibility were lodged in one head. In consequence, there would obviously be a greater probability of a corps commander, i.e., a single mind, pursuing consistently a given object than two division commanders following out the same idea independently along the same lines. If, then, the corps being united for tactical operations, maintaining a single command is quite conceivable, it is evident that such practice will all the more find application in the field of strategy. The author then advances the following opinion: "We must demand of the High Command that it clearly determine, always in accordance with the strategical situation, what it expects of the cavalry; and that it group it in a suitable manner and in sufficient numerical strength under a single command, even though in the meanwhile there may be a deficiency of this arm at less important points. This fundamental principle must be adhered to at all costs, if full advantage is to be derived from the employment of this arm. This much is certain—there are no other troops upon which the consequences of dispersion will inflict more terrible retribution than cavalry, especially when it is organically weak."

A cavalry corps cannot be improvised. It requires a large, carefully organized, and highly efficient staff, consisting of all the personnel that is needed for major operations. Merely to assign the functions of the corps commander to the senior commander of two or more divisions that have been temporarily combined would hardly meet the requirements of conducting operations for a single day, let alone independent strategic operations. It is very important, therefore, to make detailed preparations

for the staffs of the various cavalry corps, even in time of peace.

The officers of all branches of the service should make a study of the employment and tactics of cavalry. Although this subject can readily be mastered, it has been greatly neglected in many instances. This is due to the fact that cavalry tactics are not being taught so extensively as infantry tactics. Even at the service schools and in troop training, infantry tactics play the principal part, both in map maneuvers and field exercises. Compared with it, we must admit that the strategic and tactical employment of cavalry is treated very unfairly. This is quite obvious; nor will it undergo any material change in the future. The infantry divisions constituting, as they do, the principal component of an army, the instructors must needs devote their attention primarily to them. And yet, it is vitally necessary that the officers of the other arms, too, should acquire a thorough knowledge of cavalry. The advantages gained from such a study would be beneficial not only to the cavalry, but to the entire army as well.

Although every officer may be expected to acquire the necessary knowledge of the tactics and technique of cavalry, yet this does not mean that he will be able thoroughly to master the details of cavalry training. One should not fail to recognize the great difficulties that are connected with the complex training of cavalry. It is with regard to training that the officers of the other arms will always consider cavalry a specialized arm.

The organization of the cavalry cannot be considered complete unless it provides for a superior technical commander with authority to direct the purely technical training of the troops. This is absolutely essential if uniform training is to be insured. The sphere of activity of the Inspector-General of Cavalry, himself, is too much restricted to enable him to exercise the necessary influence upon the training of his arm.

No other modern arm needs this superior technical commander so urgently as the cavalry. Artillery, engineers and signal troops operate in conjunction with their infantry divisions or with army cavalry. Army cavalry, on the other hand, is the only arm which engages in combat apart from the infantry division. The cavalry, therefore, requires this particular care, if it is to accomplish the utmost that may be demanded of it for the common good.

Even prior to the World War, General v. Bernhardt voiced the demand that the cavalry be given a superior technical commander in peace as well as in war. The time, however, was not yet ripe for this change in organization. The cavalry regiments in those days were under the control of the various army corps. Hence, it would have been necessary first to organize cavalry divisions; but such an innovation would have cost considerable sums of money. In short, these changes in organization were regarded as too radical and costly during those days to be practicable. Perhaps the idea was still too new. Present conditions, however, are far more favorable. Today we actually have cavalry divisions.

The costs of creating the office of a Superior Cavalry Commander are very nominal; at any rate, they sink into insignificance if we examine the advantages that are to be gained.

The objection to the effect that the cavalry, if commanded exclusively by a chief, would lead a separate existence and easily become estranged from the other arms, can not be supported. There is no doubt that division cavalry must continue in peace time to cooperate closely with its respective infantry division. Army cavalry, on the other hand, has no connection whatever with the infantry divisions. It includes every weapon that an infantry division has; no mutual estrangement, therefore, need be feared. On the contrary, the cavalry will be able to cooperate much more closely with these other weapons, if they constitute already in time of peace an organic part of the cavalry division.

If our cavalry is to attain the highest degree of efficiency in war, it must have a commander who is responsible for uniformity of training in peace. We have observed that financial or technical reasons no longer constitute any

impediment. The personnel and matériel required for the headquarters of the Superior Cavalry Commander could readily be made available from the staffs of the lower units. What is more, one would have in time of peace the staff that will be needed in war in any case.

In solving the problem of how to create this supreme cavalry command, one may choose between two methods. On the one hand, one may increase the sphere of activity of the Inspector-General of Cavalry and put him in actual command of his arm. This would incur no special expenditure but would merely require the issuing of an order. On the other hand, one may appoint a Chief of Cavalry, with authority similar to that of the various group commanders*. In the latter case, the position of Inspector-General of Cavalry would become superfluous, inasmuch as his duties can be taken over by the Chief of Cavalry. Whether the former Cavalry Section of the General Staff would in that case have to be organized as an autonomous office remains a moot question.

*Corps commanders. Tr.

(To be continued)

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Washington, D. C.
September 10, 1934.

Cromwell As a Cavalry Leader

By COLONEL FREDERIC GILBERT BAUER, JAG-Res.

I

It is unfortunate that there is so little in print which treats the battles of the seventeenth and eighteenth centuries from the viewpoint of modern military science, for most of the great commanders of that period were not only well schooled in the art of war, but had had plenty of practical experience, so that their applications of military principles can teach us lessons which, in spite of the development of weapons, are far from obsolete, and a cavalry officer who wishes to learn how to use to the best advantage the peculiar characteristics of his arm can derive great benefit from studying how Cromwell led his Ironsides.

This paper deals only with Cromwell's career down to the close of the First Civil War in 1646, during which period he was a cavalry officer pure and simple, his command increasing from one troop at Edgehill to the entire cavalry of the New Model Army at Naseby. His later career is equally worthy of study, but then he was in chief command of a force of all arms and responsible for its proper tactical and strategic use, whereas in the earlier period, though his voice came to have great weight in the councils of war and he was the leading spirit as well as the ablest officer of the New Model Army, he was essentially a subordinate, responsible only for leading his own troops, even when on detached service, and not for the strategy and tactics of the army as a whole.

II

Englishmen of Cromwell's generation had had but little actual war experience. Since the end of the Wars of the Roses in 1485 there had been no disturbance in England of sufficient magnitude to merit the name of war, and Scottish border wars ceased with the accession of James I in 1603. So well did the navy prove itself the first line of defense in 1589 that the land forces mobilized to meet the Spanish Armada had seen no actual service. Such experience, therefore, as the men who took up arms in 1642 possessed had been obtained in Ireland, in the (usually unsuccessful) expeditionary forces which the Stuarts had raised, or in the Thirty Years' War, which was then drawing to a close on the continent. The veterans of this war occupied in 1642 much the same position as that which the veterans of our own War with Mexico occupied in 1861. Indeed, except for the fact that the two parties were not divided on geographical lines, the military situation in the English Civil War closely resembled that in our own Civil War. The royalists, including most of the nobility and landed gentry and their retainers, represented the South, and the parliamentary party, including the great middle class and the towns, represented the North. Like the North they controlled the navy, the capital, the machinery of the central gov-

"Even when surrounded by all the turmoil of a cavalry fight, Cromwell never lost his presence of mind or his control over his troops. . . He knew when to dare, when to forbear."

ernment, and the industrial, commercial and financial centers. Like the North also, they suffered in the early days from poorer cavalry, inferior generalship and political interference in military matters, until they took the one man whom the royalists had been unable to beat, and put him in virtual control, as the North did General Grant. Indeed, a careful comparison of the English Civil War with our own will show that the parallelism can be carried much further.

III

In 1642 England's military system was in a state of transition from the feudal array of the middle ages to the standing army of modern times, which had its origin in Cromwell's New Model. Though the feudal system was not abolished by law until 1660, the growing power of the Tudor monarchy had led to the establishment of a county militia system under a lord lieutenant. This system was the model and parent of the militia system which prevailed in most parts of this country until after the War of 1812 and, having a territorial, social and political background, was of limited military value. In London and probably some other large towns the train bands were well drilled and equipped, but elsewhere they had little training and cut no figure in the war.

One survival of feudalism was that cavalry, not infantry, was still the basic arm. This was partly due to the inefficiency of the infantry, half of whom in 1642 were still armed with pikes 16 to 18 feet long, although by the end of the war the proportion of pikemen had dropped to one-third. The musketeers were armed with matchlocks, which throughout our period were fired from a rest, swords for close combat, and frequently "Swedish feathers,"—iron shod stakes which were set in the ground at an angle to check a cavalry charge and hold the horsemen under musket fire. Wheel-lock and flint-lock guns were gradually coming into use but were not general in the infantry during our period. Infantry was drawn up in ten ranks, the pikemen in the center files, the musketeers on the flanks, and when several companies were united in a regiment or brigade the formation was the same as that of a single company, all the pikemen being assembled in the center and all the musketeers on

the flanks of each unit, as will be seen in the picture of the Battle of Naseby. The interval between files and distance between ranks varied from one and one-half to twelve feet, three feet being the normal interval and distance in battle, which permitted each rank to fire in turn and retire through the interval to reload. Although the formation was unwieldy, it was capable of maneuver, as is proved by Cromwell's causing Manchester's infantry to make successfully two ninety-degree changes of direction during the Battle of Marston Moor, in order to meet successive bodies of the enemy. Under a less capable leader than Cromwell, however, the infantry part of a battle, after the first discharge of musketry, frequently developed into little more than a pushing contest.

Cavalry wore cuirasses of which the breastplate was musket proof and the back piece pistol proof and were armed with a brace of pistols and a long sword having a blade resembling that of our latest model cavalry saber and a half basket hilt with an additional guard shaped like the f-hole in a violin. Although this sword is shown in all the pictures of the period, it must be remembered that these represent officers. In view of the close relations with Scotland, the unprecedented demand for weapons and the greater simplicity of manufacture and consequent less cost, it seems to me quite probable that a sword like the Scotch claymore, whose sturdier blade would have been more effective against men in armor, was used by many of the rank and file. Although it is commonly stated that there were no lancers in the English army at this time, this is disproved by a letter of Cromwell dated July, 1642, in the Squire Papers, probably addressed to some committee of the Eastern Association, wherein he speaks of having sent them "300 lances." In view of the fact that the pike was still the shock weapon of the infantry, it seems highly improbable that the lance, the chief shock weapon of medieval cavalry, should have passed out of use, particularly as it was still used in Scotland. Although Gustavus Adolphus had begun to use cavalry in modern fashion, troopers were in the early part of the war still armed with carbines, and mounted fire action was of frequent use. Indeed, one of Cromwell's great contributions to cavalry tactics was the development of shock action to replace mounted fire action.

Horsemastership had reached a higher degree of proficiency, but the charge was commonly made at the trot, and chief reliance placed on firearms, the sword being a weapon for individual close combat as in the infantry, a usage inherited from the feudal cavalry. The usual formation was in six ranks, and the charge was boot to boot. Cromwell himself was a great lover of horses and taught his men to give their mounts the best of care and to lie with them on the ground when necessary.

Each company of infantry and cavalry had its own color, so when we read in the contemporary accounts of so many "colors" of horse or foot, we must understand so many companies.

Artillery had progressed but little beyond the stage it had reached when Drake faced the Spanish Armada.

The guns were elevated by means of wedges, and the windage between the projectile and the bore was so great that in open warfare the chief value of the guns must have been for moral effect upon raw or shaken troops. Artillery was, however, useful in breaching fortifications, as had been demonstrated a century and a half earlier in Ferdinand's war against the Moors of Spain, and even in the open field it did cause casualties, as witness the death at Marston Moor of Colonel Walton's son, whose leg was broken by a "cannon shot." In open warfare it was customary to place batteries of two or three guns in the intervals between the foot regiments.

IV

At the outbreak of hostilities parliament decided to raise 75 troops of cavalry of 60 men each, beside infantry and artillery, and Oliver Cromwell became captain of Troop 67, contributing largely from his own means toward its cost. His baptism of fire was at Edgehill in Warwickshire, October 23, 1642, where the two armies showed about as much military skill and discipline as was displayed at First Bull Run. Cromwell's part in the battle seems to have been small. He is named as one of a list of officers who "never stirred from their troops, but they and their troops fought till the last minute." How he learned to train and command his troop so that it escaped the general demoralization which overtook the parliamentary cavalry we do not know. Viscount Morley (p. 118) says that he had a Dutch officer teach him drill. This appears to be based on a statement in the Squire Papers that a Dutchman named Bose was drillmaster in the regiment which Cromwell later raised in the Eastern Association, and does not account for his military ability and intuition at the time of Edgehill—an ability which not only enabled him to keep control of his troop but to discover the two great faults which appeared in that battle—the royalists' lack of control and failure to keep out a reserve and the poor quality of the parliamentary cavalry. Where he obtained this insight must remain an unsolved problem. Born in 1599, his life hitherto had been that of a simple country squire. Since the English militia, like our own militia, was organized on territorial and social lines, the probability is that he had been connected with it, but, as stated above, it could have given him little military knowledge of value. Though there were English accounts of Gustavus Adolphus's campaigns and books on military science, there is, so far as I can ascertain, no hint in any contemporary document that Cromwell had ever read any of them. We have, therefore, the case, almost if not quite unparalleled in history, of a man forty-three years old, without previous military training, entering upon the profession of arms, and after a military career of but nine years, not only leaving "a name at which the world grew pale" as one of the great generals of all time, but having created the most remarkable army of modern times, an army which was never defeated.

V

Napoleon said that in warfare moral force is to physical

as four to one, and Earl Roberts (Preface to *From Cromwell to Wellington*) said that Cromwell taught that the most efficient army is one of self-respecting men of exemplary character, well paid and well treated, for "History proves that there is no more potent force in war than a belief in the justice of one's cause and in its being favored by the Almighty." Macaulay, by no means a partisan of Cromwell, is even stronger in his praise of Cromwell and his troops, saying (Hist. Eng. Chap. I):

"Other leaders have maintained order as strict. Other leaders have inspired their followers with a zeal as ardent. But in his camp alone the most rigid discipline was found in company with the fiercest enthusiasm. His troops moved to victory with the precision of machines while burning with the wildest fanaticism of crusaders. From the time when the army was remodelled to the time when it was disbanded, it never found, either in the British Isles, or on the continent, an enemy who could stand its onset."

The dynastic wars of the continent had been fought by professional soldiers, many of them hired foreigners, who had little personal interest in their cause, except for the pay and booty it gave them. Their system of marches and leaguers was calculated less to win a decisive victory than to avoid a defeat, for, so long as they could keep the field, the longer the war lasted, the better for them. Cromwell's soldiers were citizens who wished to return to peaceful pursuits. To conquer a peace as soon as possible was their goal, and hence they sought rather than avoided battle and cheerfully risked defeat for the chance of a victory which would end or shorten the war. This was an advance over the prevailing tactics on the Continent, although here too Gustavus Adolphus had set an example, and marks the definite introduction into modern warfare of the doctrines of the offensive and the objective.

Cromwell's letters of the first year of the war (Carlyle, Letters XIII and XVI and Speech XI) show that he had not only learned the truth of Napoleon's maxim quoted above but had thoroughly grasped four great military principles of universal application and a fifth of importance under the conditions then existing:

1. The necessity of having officers who can command the respect of their men. ("If you choose honest men to be Captains of Horse, honest men will follow them.")
2. The superiority of intelligent soldiers of high character. ("You must get men . . . of a spirit that is likely to go as far as gentlemen will go—or else you will be beaten still." "A few honest men are better than numbers.")
3. The necessity of training raw levies before using them in the field. ("Some time they must have for exercise.")
4. The important part which the "cavalry spirit" plays in the efficiency of a mounted command.
5. The superiority of cavalry over infantry under such conditions as existed in the English Civil War.



Oliver Cromwell.

VI

For some weeks after Edgehill we know little of Cromwell's movements, and our next glimpse of him is in his home district where the counties of Norfolk, Suffolk, Essex, Hertford, Cambridge, and later Huntingdon joined to form the Eastern Association for the purpose of raising troops for their own defense and secondarily for general service. From the outset Cromwell, though not the titular head of the Association, was its leading spirit and was given command of a regiment of horse in its forces. His letters of this period show his ability as an organizer and executive under the financial difficulties which beset the parliamentary forces and his realization of the importance of having men properly fed and clothed and promptly paid, if they are to be efficient soldiers.

On March 14, 1643, he made a forced march of twenty miles with eight troops of cavalry and dragoons from Norwich to Lowestoff and summoned the royalist garrison to surrender. On this being refused, the Norwich dragoons captured two of the three pieces of artillery which defended the town and opened a way for the cavalry, who entered without resistance. Herein may be seen the germ of Cromwell's method of capturing fortifications. Instead of resorting to the lengthy leaguers and sieges of the Thirty Years' War, he, whenever possible, depended on a sudden assault.

We next find him trying in vain to bring about concerted action with the parliamentary commanders in Derbyshire, Leicestershire and Lincolnshire, to head off Newcastle's army, his acts showing that he well understood the principle of the objective and that the best defense

of a territory is to meet the enemy and keep him from approaching it.

His entire regiment fought its first battle at Grantham on May 13, 1643. He had under him "about twelve troops, whereof some of them so poor and broken that you shall seldom see worse," the royalists "one and twenty colours of horse troops and three or four of dragoons." "After we had stood a little above musket shot, the one body from the other, and the dragoons had fired on both sides for the space of half an hour or more, they not advancing toward us, we agreed to charge them.

... They standing firm to receive us, and our men charging fiercely upon them, by God's providence they were immediately routed, and ran all away, and we had the execution of them two or three miles." (Carlyle, Letter X). Lieutenant Colonel Baldock (p. 77) is of opinion that this action taught Cromwell the value of the offensive in a cavalry combat. At any rate, he says, Cromwell thereafter never hesitated but was always the first to charge. The fact that Cromwell's newly raised troopers in what, for many of them at least, was their first battle had routed a superior force of royalist horse gave him prestige and justified his views on the kind of men needed for the parliamentary cavalry.

His next important engagement was near Gainsborough, July 28, 1643. We have three accounts of the battle, all wholly or partly written by Cromwell himself. (Carlyle, Letter XII and Appendix 5.) Gainsborough had been captured by the parliamentary forces through a surprise night attack, and in anticipation of a royalist attempt to recover it Cromwell hastened to its defense by forced marches, with a body of cavalry and dragoons, augmented by reinforcements on the way. About a mile and a half from the town he met the royalist advance guard of some 100 horse. His dragoons, who seem to have constituted his advance guard, tried to repel the royalists by mounted fire action, but the royalist horse charged them, whereupon Cromwell's cavalry charged the enemy advance guard and drove it back on the main body, which was posted on top of a steep hill, the only practicable ascent of which was by trails leading through cony warrens which covered the slope. Cromwell's troops made their way up under the enemy's fire, and on reaching the top found the enemy drawn up within musket shot, three regiments of horse in the front line and one in reserve. Before Cromwell's troops, who were disorganized by having had to fight their way up the hill through the broken ground, could be formed in line to attack, the royalists advanced against them. Instead, however, of waiting to receive the attack, Cromwell, without waiting to complete his formation, charged at once with such troopers as he had, he himself leading the right wing. For a time neither line gave way, but finally the royalists wavered, and Cromwell, seizing the fleeting opportunity, broke their line, and his men pursued them for six miles. Seeing the royalist reserve intact, however, he kept out of the pursuit three troops of his own regiment and when the royalist reserve charged some Lincolnshire troops

which had not joined in the pursuit, he fell on them in the rear and drove them all from the field.

Thinking their work done for the time being, the parliamentary forces exerted themselves in carrying into the town the munitions they had brought, when word came that six troops of royalist horse and about 300 foot were a mile and a half beyond the town. Having no infantry with him, Cromwell borrowed some from the garrison, and they with his cavalry beat back the royalist detachments, when they suddenly found themselves face to face with Newcastle's main army, which at once attacked and drove them back in disorder. Cromwell himself, who was in the town when this occurred, went out to withdraw the infantry but found the entire force being driven in, whereupon he rallied four of his own and four Lincolnshire troops under Major Whalley and Captain Ayscough, who "sometimes the one with four troops faced the enemy, sometimes the other, . . . they with this handful forced the enemy so, and dared them to their teeth in at the least eight or nine several removes—the enemy following at their heels; and they, though their horses were exceedingly tired, retreating in order, near carbine shot of the enemy, who thus followed them, firing upon them; Colonel Cromwell gathering up the main body and facing them behind these two lesser bodies—that in despite of the Enemy, we brought off our Horse in this order, without the loss of two men." Here, then, we have Cromwell, with tired troops and horses, disordered by a struggle up hill over broken ground, charging successfully a force already formed for attack, holding out a reserve from the pursuit and with it defeating the enemy's reserve, and later with two squadrons of four troops each, covering successfully the withdrawal of a repulsed force, retiring by echelon in the face of a body far superior in numbers, and bringing all to safety with only a nominal loss. The Command and General Staff School could hardly do better, and this feat is the more remarkable because, according to Sir John W. Fortescue (p. 32), the withdrawal by echelon is not described in any contemporary military textbook. Where did Cromwell get the idea?

October 11, 1643, two cavalry forces of about equal strength faced each other on Bolingbroke Hill in Lincolnshire. Each was drawn up in three lines, Cromwell commanding the first line of the parliamentary troops, who were "extremely wearied with hard duty two or three dayes together." Both sides threw forward their dragoons, who dismounted and opened fire. Here as at Gainsborough Cromwell seized the initiative and charged the royalists, leading the charge in person, some distance ahead of his regiment.

His horse was shot under him, but a trooper caught him another, and he rejoined the fight. While the *mêlée* was going on, the parliamentary second line charged the royalists on the flank, and the entire royalist force, driven back on its reserve, broke and fled before the parliamentary third line could join in the attack and before the parliamentary infantry arrived on the field. Here we

have an attack in successive waves, the first holding the enemy in place while the second strikes him in flank, a device which, as we shall see, Cromwell used elsewhere with decisive effect. This engagement, known as the Battle of Winceby, proved Cromwell a *leader* as well as a commander, his fearless exposure of himself in front of his men ranking with Washington's at Kip's Bay and Princeton.

VII

The first year of the war may be considered the training school period of Cromwell's military career. In it he had not only proved his ability as a cavalry organizer, leader and disciplinarian but he had shown himself the only leader on the parliamentary side who was uniformly aggressive and successful. England was wearying of the war, and the Puritan party demanded a more vigorous policy under more aggressive leaders. This at once pointed out Colonel Cromwell as a man for high command, and so when the army of the Eastern Association was reorganized in the winter of 1643-4 he was made Lieutenant General. This made him second in command under the Earl of Manchester and gave him direct command of the cavalry.

We now come to the first of the two great battles, Marston Moor and Naseby, which were to show Cromwell to the world as one of the great cavalry leaders of all time. In September, 1643, Scotland and the Puritans of England had entered into the Solemn League and Covenant, in accordance with which a Scottish army, some 20,000 strong, under the Earl of Leven, entered England to assist the parliamentary forces. In the early spring of 1644 the Marquis of Newcastle had been shut up in York by a parliamentary force, and to relieve him and repel the Scottish army advancing under Leven, Prince Rupert, the king's nephew, was sent into Yorkshire. Neither the king nor parliament understood the principles of mass and economy of force, and both sent off on unimportant missions men who should have been sent into Yorkshire, where it was evident that the decisive battle of the campaign would be fought. Cromwell had thrown out a cavalry screen of nearly 7,000 men, behind which Manchester was slowly advancing to join in the siege of York, but on hearing of Rupert's advance he drew in his forces and took post near the village of Long Marston, five miles west of York. The parliamentary generals before York decided to raise the siege and join Cromwell, and accordingly the combined forces were drawn up on Marston Moor to meet Rupert and prevent him from making a junction with Newcastle. Rupert, however, retained them by a demonstration, reached York and persuaded the royalist commanders there to make a combined advance. The parliamentary generals decided to fall back to the line of the Ouse, and early on July 2 the retreat began, Cromwell and Fairfax bringing up the rear, but before the rear of the column had started Rupert's advance guard reached Marston Moor, and the parliamentarians countermarched and formed line of battle.

The main features of the battle which followed are well established, but on those details which are of most value to a student of tactics the accounts differ. The combined labors, however, of Lieutenant Colonel Hoenig of the German Army, who has analyzed the facts from a military point of view, and of Mr. C. H. Firth, who has reexamined and sifted the historical data, have given us a picture of the battle which may safely be accepted as correct, so far as the facts are ascertainable, and that version is the one here followed.

Marston Moor is between one and a half and two miles from east to west and a mile from north to south. The royalists were drawn up on its northern side, facing south, with Wilstrop Wood behind their center. In their front was open ground suitable for maneuvering large bodies of cavalry, and somewhere near their center was a piece of enclosed ground called the White Syke Close. Along the southern edge of the moor ran a ditch known as the White Syke Ditch, just north of and paralleling the road from the village of Long Marston on the east to Tockwith on the west, a distance of about two miles. South of the road the ground rose, and in a grain field on this hillside the parliamentary forces were drawn up facing north. There was a hedge between the two forces, probably on the edge of the ditch, though there is a slight discrepancy on this point. For offensive combat the advantages were all with the royalists, because the parliamentary forces, in order to advance, had to cross the ditch and hedge, which Rupert had lined with musketeers, and, in places at least, the ditch was too wide to be jumped, whereas the royalists had no obstacles in front and could attack the parliamentarians while the latter were disordered in crossing the ditch and hedge. That only the royalist left took advantage of this feature of the terrain was due to the fact that the parliamentary attack took the royalists so by surprise that the line had crossed the ditch before the royalists were in a position to attack.

As usual, both armies were drawn up with the infantry in the center and the cavalry on the flanks. The cavalry on the royalist right, commanded by Prince Rupert, was formed into two lines, 1,100 men in the first and 800 in the second. The exposed flank was guarded by a regiment of about 200, and Rupert's own regiment of 400 to 500 guarded the interval between the cavalry and the infantry center. In numbers and formation the cavalry of the left under Goring was similar, except that there was no body corresponding to Rupert's regiment. On both flanks musketeers in companies of 50 were posted behind the first line of cavalry so as to be able to fire through the intervals between the squadrons—a device copied from Gustavus Adolphus which Rupert is said to have used also at Naseby, though Rushworth's picture does not show it. The infantry was drawn up in three lines, with an advance detachment, or "forlorn hope" in front of its right where the ground was most favorable to an attack.

On the parliamentary right Sir Thomas, son of Lord Fairfax, drew up his cavalry in two lines, but the first

line contained some raw levies, who did not behave well in battle. His reserve, which may have been posted in a third line, consisted of three Scotch regiments and some Scotch lancers. His total force was about 2,800. The infantry was drawn up in three divisions of two lines each, that of the Eastern Association under Manchester being on the left opposite the place where the royalist "forlorn hope" was posted. The cavalry of the left wing under Cromwell was formed in three lines, his own Eastern Association cavalry, numbering 2,000 to 2,500, forming the first two and three badly mounted Scotch regiments, numbering about 800, the third. On the exposed flank were Frizell's half regiment of Scotch dragoons and probably also the Eastern Association dragoons, making 800 to 1,000 in all. Cromwell's own cavalry was formed into squadrons of two or three troops.

The royalist army totalled 11,000 foot and 6,500 to 7,500 horse, the parliamentary army 19,000 or 20,000 foot and 7,000 horse.

For several hours the two armies faced each other without advancing, the artillery exchanging occasional shots and the Puritans singing the battle hymns of Israel's poet king and listening to exhortations of their chaplains. At intervals showers drenched the troops. At the end of the afternoon the royalist leaders made up their minds there would be no battle that day and began to relax. Suddenly, toward evening, the hour being variously stated at from five to seven o'clock, the royalists looked up to see the entire parliamentary line in motion against them, Manchester's infantry already crossing the ditch and Cromwell's horsemen moving around its west end.

Watson, Cromwell's scoutmaster, thus describes the attack:

"We came down the hill in the bravest order, and with the greatest resolution that ever was seen (I mean the left wing of horse led by Cromwell). . . . Our front divisions of horse charged their front. Lieutenant General Cromwell's division of 300, in which himself was in person, charged the first division of Prince Rupert's, in which himself was in person. The rest of ours charged other divisions of theirs, but with such admirable valour as it was the astonishment of all the old soldiers of the army. Cromwell's own division had a hard pull of it; for they were charged by Rupert's bravest men, both in front and flank; they stood at sword's point a pretty while, hacking one another; but at last (it so pleased God) he brake through them, scattering them before him like a little dust. At the same instant the rest of our horse of that wing had wholly broken all Prince Rupert's horse on their right wing, and were in chase of them beyond their left wing."

The "Full Relation" (p. 9) says that the dragoons "acted their part so well that at the first assault they beat the enemy from the ditch." Hoenig thinks that Cromwell had part of his cavalry cross the ditch and the rest go around it. Though there is no contemporary men-

tion of such a maneuver, it will be noted that it is entirely consistent with Watson's account. If the attack of the dragoons preceded Cromwell's charge, it is hard to see why the royalists were so taken unawares. Royalist writers state that Lord Bryon, who commanded the regiment on the extreme right of their front line, attacked contrary to orders and was himself caught in the broken ground by the charging Puritans. However these details may have been, it is certain that Cromwell's charge broke Rupert's first line eventually, and the Prince, rallying what he could of them, attacked at the head of his second line. Though checked, Cromwell's men did not break, and just then the second line, under David Leslie, which had followed the first, echeloned to the left, struck Rupert's right flank, thus repeating the maneuver at Winceby. Though wounded, Cromwell kept the field and now led a charge which drove Rupert's men from the field. In his own words, "God made them as stubble to our swords." Here again we see his control of his men, for, sending certain squadrons to pursue Rupert's troopers, he held the main body in formation and faced to the east to assist the infantry.

Manchester's infantry, on the left of the parliamentary center, crossed the ditch, which was more or less filled up in their front, and drove back the royalists opposite them. Lord Fairfax's infantry, next them on the right, advanced, but were driven from the field by Newcastle's Whitecoats. Their defeat and that of the cavalry on the parliamentary right uncovered both flanks of the Scotch infantry, who broke and fled except five regiments, who stood their ground and repelled three royalist charges.

On the parliamentary right wing things had gone even worse. With the exception of some 400 troopers, whom Sir Thomas Fairfax succeeded in forming on the open ground and with them routing a part of the royalist left, the entire wing was hopelessly routed. One division of Goring's men attacked the right of the Scotch infantry, and the rest either chased the flying parliamentary horse or set to plundering the baggage in the Puritan camp. When Sir Thomas Fairfax returned from the pursuit, he found royalist cavalry on the ground his own troops had occupied. His small detachment broke before them, and he himself, wounded, made his way across the field to report the disaster to Cromwell.

Cromwell and Leslie had reformed their men on the ground north of where the royalist right had been, and on learning of the disaster on the parliamentary right, Cromwell ordered the entire Eastern Association army to wheel to the right and advance across the field to the east, while he with the horse fell upon the troopers attacking the Scotch infantry and such others of Goring's men as had returned from the pursuit. The positions of the forces were now reversed, Cromwell occupying the favorable ground which Goring had held at the beginning and Goring's men advancing through the same "whins and ditches" which had broken up Sir Thomas Fairfax's formations. Disordered as they were, and on unfavorable ground, they were easily routed by Cromwell's disciplined

squadrons, who now, in the words of the Full Relation, "set upon the reare of their foot and with the assistance of our main battell (The Eastern Association infantry), which all this time stood firme, we put them wholly to the route." Newcastle's Whitecoats stood their ground in the White Syke Close until all were killed. The Puritans lost 1,000 killed, the royalists 3,000 killed and 1,600 prisoners. Lieutenant Colonel Hoenig says that no cavalry leader ever accomplished so great and varied tasks with so small a force as did Cromwell in this battle. He had defeated in succession all the elements of the royalist force, except the few cavalry routed by Sir Thomas Fairfax and the division of infantry defeated by the Eastern Association foot. It was after this battle that Rupert called Cromwell an Ironside or Ironsides—a name afterward used for his troops. It was his first major battle and established his men's reputation for battle efficiency and his own as the ablest troop leader on the parliamentary side. At Marston Moor Cromwell and Rupert faced each other, and the result showed Cromwell's superiority in troop leadership. Said Clarendon:

"That difference was observed shortly from the beginning of the war: that though the King's troops prevailed in the charge, and routed those they charged, they never rallied themselves again in order, nor could be brought to make a second charge again the same day, whereas Cromwell's troops if they prevailed, or though they were beaten and routed, presently rallied again, and stood in good order till they received new orders."

VIII

Marston Moor should have taught the parliamentary leaders the principle of the objective, for their victory forced York to surrender on July 15, but instead of combining to follow Rupert and attack the army commanded by the King in person, they divided to reduce minor posts still held by the royalists. In the south the King had been successful, and an Eastern Association force under Manchester met him near Newbury October 26, 1644. A turning movement was planned, but Manchester failed to do his part, and Charles, learning of the plan, escaped during the night. Cromwell charged Manchester with deliberately allowing the King to escape, and the charge is probably true, for it is in keeping with Manchester's utterances and other conduct. Cromwell's troops were nearest to the route by which the King escaped, and the one serious error which can be charged against Cromwell in his entire military career is that he waited until morning before pursuing, by which time it was too late. Our knowledge of the details, however, is too scanty for us to pass a positive judgment.

Manchester's repeated refusals to follow a more vigorous line of action to which he was urged by Cromwell led in the winter of 1644-5 to the latter charging him with disloyalty and incompetence and to the creation of the New Model—the beginning of the British regular army. Cromwell pointed out to parliament that if they

would win the war, they must have a truly national army subject to them alone, "casting off all lingering proceedings like those of soldiers-of-fortune beyond the seas to spin out a war. . . . I do conceive if the Army be not put into another method, and the war more vigorously prosecuted, the People can bear the war no longer and will enforce you to a dishonorable peace." It is a pity that our own officials could not have studied Cromwell's remarks on this subject during our War of 1812.

The result of this controversy was the passage of the New Model Ordinance which provided that the regular forces should consist of 6,000 horse, 1,000 dragoons and 14,000 foot, with Sir Thomas Fairfax as Captain General and Philip Skippon as Major General, the office of Lieutenant General being significantly left vacant. The Ordinance required all members of parliament holding commissions to resign them within forty days. There was, however, no prohibition against their being reappointed, and in Cromwell's case parliament, realizing how necessary he was to the cause, extended the period from time to time.

The arrears of pay due them and the uncertainty of their future while the New Model Ordinance was under discussion produced in the army a spirit akin to that which in our own army a century and a half later produced the Newburgh Addresses. Cromwell, however, insisted that in spite of grievances the men would remain true to their duty and that the change in officers would not demoralize them, and subsequent events proved he was right. Furthermore the King was in no condition to take advantage of the conditions which existed, so the New Model Army was formed without any mishap, Cromwell with a cavalry force maintaining a screen between it and the royalists until it was fully organized and ready to take the field. More than half of its cavalry was drawn from that of the Eastern Association, which Cromwell had trained and led, so that it was not only strongly imbued with his spirit but was thoroughly loyal to him.

April 19, 1645, Cromwell with a brigade of cavalry arrived at Windsor for the purpose of resigning his commission in compliance with the Self Denying Ordinance. News reached parliament that Rupert, who was at Worcester, had sent a force to Oxford to bring the King and the artillery there to join him, and on April 23 Cromwell was hurriedly sent into Oxfordshire with a thousand cavalry to prevent this junction. At Islip Bridge the next day he charged and broke three regiments of the enemy, one troop of his old regiment successfully charging an entire squadron. He killed 200 and took 200 prisoners and about 400 horses. Some of the survivors threw themselves into Bletchington House which, on being summoned, surrendered without firing a shot, for which act the royalist commander was tried by court martial and shot. He undoubtedly deserved his fate, for Cromwell himself said in his report: "I did much doubt the storming of the House, it being strong and well commanded, and I having few dragoons, and this being not my business—

Eruption of His MAJESTY'S ARMY of Horse and Foot, and of his Excellencies S^r THOMAS FAIRFAX: as they were drawn into several Bodies at the BATTLE of NASBIE, June the 14th 1645.



A. Olkey's Dragoons in the Hedges. B. Rudput Hill. C. Fanny Hill. D. Parliamentary Train. E. Mill Hill. F. Ireton. G. Skippon. H. Fairfax's Regiment. I. Whalley. K. Cromwell. L. Langdale. M. King Charles. N. Rupert. O. Rupert's Regiment of Foot. P. King's Life Guard.

The shed of tonshin count a who w time of of the produce Naseby will be like an east and separati and com cavalry to fifty the open field is a

and yet we got it." (Carlyle, Letter XXV.) It shows the reputation of Cromwell and his men that a summons to surrender and a threat of assault (which meant that if the assault were successful, the entire garrison could under the law of war at that time be refused quarter, as was later done by Cromwell in Ireland) was in several instances sufficient to bring about a surrender.

On the 26th he defeated in a meeting engagement a regiment of foot marching from Faringdon to Oxford, capturing 200 of them and killing or dispersing the rest. Three days later he summoned Faringdon House to surrender, but the commander refused. As Cromwell was in too much haste to await the arrival of infantry and artillery, he stormed it with cavalry only and was repulsed with a loss of 14 killed and 10 captured. He had, however, checked the King's movement by defeating his covering forces and commandeering all the draft horses of the neighborhood, so that the royal artillery could not be moved, Charles had to get some of Goring's cavalry to cover his junction with Rupert and so could not move till May 7.

The New Model was now ready to take the field, and after parliament had ordered a day of public prayer for its success Fairfax on April 30 marched from Windsor and two days later was joined by Cromwell at Newbury. Parliament had again lost sight of the principle of the objective and scattered its forces to besiege or relieve places of minor importance instead of uniting them to defeat Charles' army. By June, however, it saw its error, and a succession of successes on the part of the King impressed on their minds more than ever that Cromwell was the one man in the army who consistently won victories. Accordingly formal authority was given for his appointment as Lieutenant General, and on June 13 he rode into camp amid shouts of the soldiers: "Ironsides is come to head us." On the next day the New Model fought its first battle.

IX

The village of Naseby lies in the center of the watershed of England, near the northwest border of Northamptonshire. We fortunately have preserved to us both an account and a picture plan of the battle by John Rushworth, who was with the parliamentary baggage train at the time of the battle. This plan gives us an excellent idea of the terrain and the line of battle and is herewith reproduced. The view is looking about northwest from Naseby village in the foreground, but for convenience it will be referred to as though the north were at the top, like an ordinary map. The Hedgerows shown on the east and west were substantial obstacles, that on the east separating the clay moor of the battlefield from low land and cony warrens, so that neither flank was suitable for cavalry maneuvering. The ridge in the foreground rises to fifty feet and the Dust Hill ridge to thirty feet above the open moor, each with a gentle slope, and the entire field is about two miles square.

On the night of June 13-14, 1645, the King's main body lay at Market Harborough, eight miles away, with a rear guard at Naseby. During the evening Ireton with a cavalry force attacked this rear guard, which fled precipitately to the main body. The royalist officers felt great contempt for the New Model on account of the low social rank of many of its officers and the fact that many of its soldiers were new recruits, whereas the King's troops were veterans. Indeed, a letter of Cromwell written just after the battle shows that parliament had not much confidence in its untried army. The King accordingly, after holding a council of war, determined to turn back and beat the parliamentary force.

The New Model, which had bivouacked at Guildsborough, two hours' march to the south, reached Naseby about five A.M. and was drawn up on the ridge on which the village is located, while Sir Thomas Fairfax and Cromwell rode forward to reconnoiter. As they did so, the King's army came into view on the Dust Hill ridge, and they withdrew their forces about 100 feet behind the crest in order to conceal their dispositions from the royalists. Rupert, who also had ridden forward to reconnoiter, with his usual impetuosity decided that this movement indicated a retreat and sent word to the King to hasten his advance. The royalist army accordingly gave up its defensive advantage on Dust Hill and advanced into the open moor, and by ten or eleven A.M. the battle was on.

Rupert's haste had two unfortunate results for the royalist army: first, there was not time to bring up the artillery, so that only two of the King's guns got into action, a disadvantage which was offset by the fact that the parliamentary artillery was posted so high that the guns did little damage; second, it enabled the parliamentary horse to choose the meeting point, so that contact came while the royalist horse were charging up hill and the parliamentary horse down hill.

The dispositions of the two armies are shown in Rushworth's plan, although their initial positions must have been farther apart than there shown. The royalists are estimated at from 7,500 to 10,000, of whom half were cavalry, and the New Model had 6,000 cavalry and 7,000 infantry.

As the royalist lines swept across the moor, Okey's dragoons, posted in Sulby Hedges on the west, fired with effect on Rupert's cavalry, but they kept on and struck Ireton's troops on the slope of Fanny and Rudput Hills. For the moment Ireton had the advantage, but his charge was badly supported, and he had to divert some of his men against the royalist infantry, who were firing on him, so that Rupert cut his way through, Ireton himself being wounded and unhorsed. Here again Rupert's lack of discipline was shown, for his troopers continued the chase and attacked the parliamentary baggage train. Not until they were repulsed by its guard did it occur to their officers that their presence was needed on the main battlefield. This delay gave Ireton time to rally his troops.

In the center each side fired one volley and charged. Only Fairfax's regiment withstood the royalist onset. Al-

though the front ranks of the other four regiments broke, the leaders rushed up the second line, and a hand-to-hand fight with swords, pikes and clubbed muskets followed. Skippon was wounded but refused to leave the field or give over the command. Fairfax's helmet was struck off, but he declined the offer of another, and for three hours the battle waged.

The right wing under Cromwell, 3,600 strong, charged Langdale's 2,000 veterans without waiting, Whalley attacking in front and Cromwell on the exposed flank. Cromwell's right was echeloned to the rear more than is shown in the picture, and because of the longer route which Cromwell's men had to go and perhaps also because of their more unfavorable terrain, Whalley's attack was delivered first. For a moment he was checked, but while his men were engaged in a sword fight Cromwell struck Langdale's exposed flank, and Langdale's men broke and fled, part falling back on the reserve and part leaving the field "harder and faster than became them," says Clarendon. Never for a moment, however, did Cromwell lose control of his men. Designating certain squadrons to continue the pursuit and keep Langdale's men from taking further part in the battle, Cromwell led the rest against the royalist foot, which was having rather the better of its contest with the parliamentary infantry. Charles put himself at the head of his Guards and what was left of his reserves and prepared to lead a desperate charge against the Ironsides, but a nobleman seized his bridle, saying, "Will you go upon your death?" The Guards, mistaking the command then given, retired some distance from the field. The royalist infantry was now assailed in front, flank and rear, for Okey had mounted his dragoons and some of Ireton's men had reformed. The reserves were unable to stem the tide and one by one the regiments surrendered except Rupert's own, which like Newcastle's Whitecoats at Marston Moor, resisted charge after charge until they died where they stood, Fairfax killing the ensign and capturing the colors with his own hand.

Now came a lull in the battle while Fairfax and Cromwell reformed their men for a new advance. Their position was slightly in advance of that which they had occupied at the beginning of the battle. At this point Rupert returned from the chase and was allowed to rejoin the King in the rear, for Fairfax and Cromwell refused to hazard the completeness of their victory by allowing their men to attack his stragglers before they themselves were fully formed. With the remnant of Rupert's and Langdale's men and such mounted reserves as were still on the field, Rupert and the King formed a new cavalry line and prepared for a final charge. Opposite them the Puritans were forming their troopers, leaving a gap in the center for the infantry. As soon as this came up, they charged, but the charge was never delivered, for the royalist horse broke and fled without awaiting it. Then and not till then did Cromwell let his men go in pursuit, the chase being continued for twelve miles. Of the royalist infantry scarcely a man escaped death or capture. All

the royal artillery was captured and a large number of officers, leaving the King without the means to form and train a new army.

Here, as at Marston Moor, the better discipline of Cromwell's men was apparent. In the hottest of the fray he kept his forces in hand, so that they were ready for the rapidly changing situation on the battlefield. It also illustrates the characteristic method of attack which we saw used at Winceby and Marston Moor—striking with a part of the cavalry at the enemy's front and when he is thus pinned down striking him on the flank with the remainder, thus using the mounted force as both a pivot of maneuver and a maneuvering force. Lieutenant Colonel Cooper King of the British Army in "From Cromwell to Wellington," says that at Naseby all the points of good cavalry leading were shown: a bold charge with the *arme blanche*, the use of a second line and reserve, the timely rally after the charge and again before the pursuit, and the pursuit of the foe to ruin; and Lieutenant Colonel Hoenig says (Oliver Cromwell, vol. 1, p. 203): "There is scarcely a battle where cavalry has been used better than that of Cromwell at Naseby." The New Model Army had fairly won its spurs as a fighting machine and more than justified Cromwell's ideas in its organization.

X

Cromwell's next service was in the South where Goring was besieging the parliamentary stronghold of Taunton in Somersetshire. Parliament had by this time come to realize the principle of the objective and allowed Fairfax a free hand. He accordingly hastened South to engage Goring, who on his approach raised the siege and took position near Langport, on top of a hill with a stream and marshy ground in front. The ford across the stream was wide enough for only two troopers abreast, and the lane from the ford to the top of the hill was flanked by hedges and enclosures, which Goring had lined with musketeers. Intending to fight only a delaying action and withdraw to Bridgewater, Goring had sent all but two of his guns on before him. Fairfax began by an artillery preparation, which silenced Goring's two guns and forced his cavalry to move farther back, leaving the infantry unsupported. He then sent forward 1,500 musketeers, who drove in the musketeers with whom Goring had lined the approach up the hill, thus clearing the way for the cavalry. Cromwell then detached from his own old regiment a force of 120 under Major Bethell to charge through the ford and up the lane at Goring's cavalry, with 180 more under Major Desborough to follow in support. Bethell crossed the ford, charged up the hill and broke the royalist line. On being charged in turn by 400 of Goring's troopers, he cut his way back to where Desborough was coming up to his support, and, wheeling about, they together charged the royalists, who, though superior in numbers, gave way. The parliamentary musketeers then came up and opened fire, and Goring's entire force began to run. Cromwell halted Bethell and Desborough until the entire cavalry came up and sent it

off in an organized pursuit. Two miles farther back the royalist cavalry made another stand, but one charge of Cromwell's men dispersed them in flight towards Bridgewater, Cromwell pursuing them through the streets of Langport, capturing their two guns and 1,400 prisoners.

Fairfax then pushed on to capture the royalist stronghold of Bridgewater. The town is divided by the River Parrot into two parts, East and West. At dawn storming parties threw portable bridges across the moat in the East part and rushing over them, planted scaling ladders on the walls. On capturing these, they turned the guns against the town and let down the drawbridge, over which Cromwell's old regiment dashed into town and cleared the streets. The royalists in the West part of the town had been the object of a holding attack which prevented them from aiding their comrades in the East part, and after their own part of the town had been set on fire by shot and grenades they surrendered.

So far as can be learned from contemporary accounts Cromwell in his attacks on fortified places took four successive steps:

1. Thorough reconnaissance and preparation of the necessary material (scaling ladders, portable bridges, etc.), this period in important cases ending with an exhortation to the troops by the chaplains;

2. Securing a foothold inside, either by escalade or by making a breach by cannonade, and sending a storming party through it;

3. Following up the storming party with an infantry support strong enough to hold the foothold gained;

4. Exploiting the success with cavalry.

These principles were further exemplified in the attacks on fortified places in the southwest of England during the late summer and autumn and resulted in giving parliament a chain of fortified posts from the Severn to the Channel, thus cutting off the remnant of Goring's army from the rest of England and confining it to the counties of Cornwall and Devonshire.

XI

By this time the country was thoroughly tired of the war, and the excesses of the royalists had led to the formation in some counties of bodies of "clubmen," who maintained a sort of armed neutrality and endeavored to keep the troops of both sides out of their territory. Cromwell with a cavalry force was sent to disperse them. He began by showing them how their own best interests were bound up in the triumph of parliament, and his combination of tact and leniency where possible and firmness and force where necessary may serve as an example to all officers charged with supporting the civil power or quelling domestic disturbances. (See Carlyle, Letter XXX.)

Though the royalists had now no army in the field capable of meeting the New Model, they still held several strong fortifications, one of the chief being Bristol, near the mouth of the Severn, which had masonry fortifications with a strong castle in the center and a line of earth-

works outside, forming a first line of defense. It was held by Rupert with a garrison of 3,500 beside the local train bands and auxiliaries. In order not to leave so strong a post in his rear and to prevent the clubmen of the vicinity from joining Rupert, Fairfax suddenly invested the city on August 2, preventing any escape of the garrison. He had been informed that as soon as his army arrived a considerable part of the population would rise against Rupert, but this report proved false. Since the fortifications were so extensive that in some places they were necessarily thinly held, a general assault was decided upon, to take place at one A.M., Wednesday, September 10. The plan was to surprise the outer line by a night attack and then await daylight before attacking the city walls themselves. The attack was well synchronized and the outwork captured without much difficulty, except one redoubt where three hours' fighting took place. Cavalry in each case followed the storming party to exploit the success. On the north side the attack on the city walls was successful, and two gates were captured. On the south side the walls proved too high for the scaling ladders, and the attack was beaten off, but at this point the garrison fired the town in three places, so Rupert sent to treat for a surrender, which was effected the next day. So unpopular had Rupert made himself by his plundering that the victors had to safeguard him and his men from the infuriated populace. Although Cromwell took an important part in this attack and wrote the official account, which parliament ordered to be read in all the churches about London, we unfortunately do not know just what his part was.

Cromwell was next sent with four regiments of foot and three of horse to reduce the royalist garrisons in Wiltshire and Hampshire. We have his own account of three of these: Winchester, Basing House and Langford House. At Winchester he entered the town and summoned the castle to surrender, but was refused. He then put his artillery in order for a bombardment, fired one round from his six guns and sent a second summons, which was likewise refused.

"Whereupon we went on with our work, and made a breach in the wall near the Black Tower; which, after about 200 shot, we thought stormable; and purposed on Monday morning to attempt it."

On Sunday evening, however, the governor negotiated for a surrender. "The castle was well manned with Six-hundred-and-eighty horse and foot, . . . well victualled; . . . the works were exceeding good and strong. It's very likely it would have cost much blood to have gained it by storm. We have not lost twelve men." (Carlyle, Letter XXXII.) This is another case where the known reputation of Cromwell and his men produced results.

On October 14 he took by storm Basing House in Hampshire, which had successfully withstood all attacks during the entire war. The fortifications were nearly a mile in circumference, well manned, and had as Rev. Hugh Peters says, "provision for some years rather than

months." Cromwell's account of the victory (Carlyle, Letter XXXIII), which also was ordered by parliament to be read in the churches, is interesting, not for its meagre account of the military operations, but for the sound views which he therein sets forth on the true use of fortifications, pointing out that, unless a fortification is at a strategic point, it is an element of weakness rather than strength, because it uses for its garrison men who could be better employed in the field, and that the true place for a fortification is on the exposed frontier, to keep the enemy away from the district to be protected. Evidently his views had come to be respected both in and out of parliament, for Basing House was destroyed and in his report he says: "I believe the gentlemen of Sussex and Hampshire will with more cheerfulness contribute to maintain a garrison on the frontier than in their bowels, which will have less safety in it."

Three days later Langford House surrendered on his summons, although he apparently had only cavalry with him to enforce his demand.

We have little information of Cromwell's doings for the next three months, but on January 9, 1646, he was again in the field and surprised Lord Wentworth's brigade at Bovey Tracey. Here we have the only known instance of a lapse from strict discipline on the battlefield by the Ironsides. The royalist officers, who were gambling in the inn when Cromwell came upon them, at once threw their stakes out of the window and made good their escape while the Ironsides were picking up the money. In view of the fact that their pay was in arrears and their clothing worn out, their conduct is perhaps excusable. Wentworth's brigade, however, was scattered and 400 horses captured.

From January to April Cromwell was with Fairfax capturing what remained of the royalist forces and fortresses. After the fall of Exeter on April 9 he returned to his seat in parliament, which thanked him for his "great and faithful services." In June he went to Oxford to marry his daughter to Commissary General Ireton on the 15th and to participate in the negotiations leading up to the surrender of the city on the 30th. Tradition says that the leniency shown the garrisons of Exeter and Oxford was due to his influence with Fairfax.

With the surrender of Oxford Cromwell's career as a cavalry leader closes. When he next took the field in the Preston campaign, and thereafter, he was in com-

mand of an independent army composed of the three arms, though Fairfax continued to hold the position of Captain General until June 26, 1650. The military principles by which Cromwell subdued Ireland and won Preston, Dunbar, and Worcester were those which he developed as a cavalry leader in the First Civil War and are summarized by Lieutenant Colonel Baldock (pp. 520-516) as follows:

"Even when surrounded by all the turmoil of a cavalry fight Cromwell never lost his presence of mind or his control over his troops, and in conducting a campaign he never lost his grasp on the situation of affairs. With unerring judgment he suited his strategy to the conditions of the case. He knew when to dare, when to forbear. . . . Gifted with a marvellous military genius, teaching himself practically the art of war in the field, beginning at the lowest ranks and working steadily but rapidly up to the highest, he understood the new conditions, and stands out as the first great exponent of the modern art of war. His was the strategy of Napoleon and Von Moltke, the strategy which, neglecting fortresses and the means of artificial defense as of secondary importance, strikes first at the enemy in the field."

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NOTICE

The Cavalry Association is desirous of purchasing several copies of "The German Cavalry, 1914, in Belgium and France," by M. von Poseck, published by E. S. Mittler & Sohn, Berlin, for the U. S. Cavalry Association, 1923. Now out of print.

Will It Happen Again?

BY MAJOR LEONARD R. BOYD,
Infantry

Part III

JULY 20. THE THIRD DAY

ORDERS to attack were received during the otherwise uneventful night. The company formed with the rest of the battalion at daybreak, and, led by Lieutenant Colonel Craig, we moved along the high ground overlooking the Chazelle ravine. Company D was now the right assault company and had little to do except to keep its formation under well observed artillery fire. German airplanes were overhead most of the time and their interest in us was usually followed by a flock of shells in our midst. We had not seen Allied airplanes since the opening hours of the attack and many bitter remarks were passed relative to our air service enjoying itself in Paris.

The battalion was halted just west of the Bois de Maurée, which shielded us from direct observation across the valley to the east. We found a company of Algerian negroes in the western edge of the woods. I tried to find out from the officers where they intended to go but, as far as I could ascertain, they were not particularly interested in going anywhere and knew nothing about the Germans or their own troops. Two German airplanes flew by during this conversation, circled a few times and disappeared to the east. I was not surprised to hear the vanguard of approaching shells follow the airplane visit. Three or four batteries seemed to know the exact position we were in and were wasting little time between shots. I moved to company at "double time" down through the woods with the barrage at our heels. We reached the bottom of the slope and halted, under cover of the railroad fill, where we waited for further orders. The artillery now switched back to the top of the woods and began a prolonged bombardment. I expected the negro troops would move forward and join us soon after the shelling started, but they did not. A few hours later an officer arriving at the position told of seeing a company of negro soldiers, most of them dead and scattered around the ground, and even hanging on the low branches of the trees. I could not understand why the officers had not moved when their location was so definitely known to the Germans.

We had rested at the railroad cut but a few minutes when Lieutenant Colonel Craig arrived with Companies B and C. Officers stated that Company A was still in the woods and was badly cut up by shell fire. Lieutenant Colonel Craig ordered Companies C and D to move to the front and take up a defensive position east and southeast of Visigneux. The two companies started from the fill with Company D on the right. Scattered machine-gun fire greeted us but no casualties occurred. I found in forming for this movement that a great many more men



Affected by hunger, thirst and fatigue.

were missing than had been killed or wounded. Most of this trouble was found in platoons and squads which had lost their leaders. It happened this way: The company, halted under fire, sought the protection of any shell-holes or depressions, and individuals, either through design or accident, were left behind. I was worried over this matter until I found that all the company commanders were having the same losses.

In our advance to the town of Visigneux we passed a spring of cold water bubbling out of the ground. Men turned to see if I had noticed it and I knew from my own feeling that a halt would be most welcome. I signalled to Company C that we were going to halt and stopped about fifty yards beyond the spring. Then I sent back a squad at a time with the platoon canteens.

We passed to the right of Visigneux, which was filled with units from the French Foreign Legion. As we

Morale and loyalty are not inexhaustible, and the destruction of these forces seriously impairs the fighting power of the entire command.

reached a sunken road, leading south from the town, American shells began to fall in the field directly to our front. We did not expect any artillery assistance to be furnished us and were forced to halt. One gun was shooting quite short, the shells frequently falling in rear of us, while the rest fell within a few score yards of our front. Machine-gun bullets were zipping overhead, apparently sweeping the open field north and west of the Bois Gerard. German shells searched on both sides of the sunken road.

A battalion of the Foreign Legion moved north on the road and stopped near our position. I found that the Commandant spoke English and told him of my plan to take the company through the woods to our right and work back to a point in front of our present position. He stated that he had tried it a few minutes before and that there were so many machine guns there that he had withdrawn and asked for artillery fire on the woods. He advised me to wait for the artillery fire to do its job, then, if I desired, the two units could advance through the woods. This was agreed upon and a message sent to Lieutenant Colonel Craig informing him of my plans. The American barrage began to put most of its shells close to the road and the Commandant asked if I could have the range increased. I was nonplussed as our military apparently had few observers out and no liaison details, and as we had no Very pistols, we had to depend on their observation to keep the fire off the front line. I explained our shortage of equipment and the Commandant had several six-star rockets sent up. The "shorts" continued. More rockets were sent up and still the shells fell short. The Commandant, smiled, shrugged his shoulders and remarked, "C'est la Guerre!"

I returned to the company and waited for the American barrage to cease and the French to start. In a few minutes the French batteries opened a heavy fire on the woods where I had planned to lead the company. It would have fallen either on us or to our rear had the movement been started. A French machine-gun cart, passing by our position, drew machine-gun fire from the ridge to our left rear, where the 26th Infantry had been reported. It was hard to understand why the 26th Infantry, from their commanding position, had not seen the two companies advance, but we were more concerned with danger from our rear than the front. The Commandant passed by and told me he was taking his unit to the rear until the American artillery and machine guns lifted their fire. He then hastened to assure me, with true French politeness, that he had observed the work of the 16th Infantry that day and that it was worthy of veterans. The French column drew more fire from the 26th Infantry, but their range was short and we were endangered only by ricochet bullets.



My men, kneeling, had excellent targets.

The French having passed from view, left us as the next target and bullets began to smack into the side of the road where the company was sheltered. An officer of the company stood on a stump and waved a handkerchief toward the machine gunners in hope that they would cease firing. This figure gave the gunners a good aiming point and their fire concentrated on him, whereupon all attempts to signal were promptly abandoned. I decided it was unnecessary to subject our troops to this firing and ordered the company to move to the rear—and at a walk. I emphasized this last part of the order and all knew what was meant.

I halted the company in a grove of willows 300 yards southwest of Visigneux and hoped that the 26th Infantry had not observed our movements. The trees were small and I cautioned the men not to expose themselves to view from the 26th Infantry position. All was quiet while the company was being formed in two lines among the trees and I was congratulating myself on our good fortune when the observant machine gunners to our left rear opened fire. A stray German shell dropped in our midst. I felt that we might get artillery fire anywhere, but the continual machine-gun fire from American positions was quite demoralizing, even though we had received no casualties from it. I decided that the machine guns would soon find human targets and gave the order to move to the woods east of the railroad near the fill and to our rear. Scattered machine-gun fire followed us to the woods but, fortunately, no casualties resulted.

I placed two platoons around the edge of the woods and kept two in support near the railroad tracks. I then reported to Lieutenant Colonel Craig and was instructed to remain in the present position until further orders. Concentrated shell fire had been falling on the railroad but none had fallen in the woods in which Company D was situated, I felt that fortune had smiled on us again in that we had gained our position without being observed, but this pleasant thought was shattered when the German artillery concentration lifted from the railroad fill to the woods where we were rather closely assembled. Shells of light and medium caliber ranged back and forth over the area and I again heard the calls of the wounded. Many shells detonated by the branches of the trees burst overhead and sprayed steel missiles over the entire area. The commander of Company D was knocked out by one shell and was carried to a dugout west of the railroad. The company drifted back to the railroad cut and dugouts, bringing the wounded with them. During the night the company commander was evacuated to the battalion aid station in the town of Chazelle and the command of the company fell to the lieutenant who had failed to join with his platoon on the morning of July 19. The company

was badly cut up and less than 100 men remained for duty.

The entire battalion, dug in on the railroad fill, was startled during the late afternoon to hear the American barrage fall to its rear and to watch it move forward, straight toward the fill. The barrage was perfect, all guns with the same range, and shells evenly spaced over a 200-yard front—only it was going to pass directly over us. All crouched low in their fox-holes and the shells whined and burst around us—then after a sickening, long halt on us moved past to the east. Strange to say, not a man was wounded, as no shells fell directly on the fill, and those falling short exploded in the soft earth and threw their fragments high into the air. We wondered what had happened to the artillery liaison officer who had visited us at the railroad fill some hours previously.

JULY 21. THE FOURTH DAY

The operations of Company D, 16th Infantry, on July 21 and 22, were primarily those of a composite company, formed of four platoons of which Company D acted as one, with Companies A, B and C as the remaining units. The heavy casualties of the ensuing days resulted in a consolidation of the remaining officers and men into platoons in which the company identity was lost. The following account deals with the 1st Battalion, 16th Infantry, which, as explained above, will include the operations of Company D, 16th Infantry:

The attack started at 6:00 A.M. The battalion formed in two waves and moved across the open fields south of Visigneux. Lieutenant Colonel Craig was killed by machine-gun fire shortly after passing this town. This was a serious loss to the battalion for this officer radiated confidence, and, by his actions, inspired the entire command to deeds of valor. He was sadly missed during the next few minutes, for the battalion encountered heavy machine-gun resistance in the Bois Gerard and the support wave merged with the assault line. After emerging from the woods a machine-gun nest divided the line and the left half of it lost contact with the remainder of the battalion. Later in the day the two forces joined again, after



The tension of days of combat interferes with digestion.

the left half had been surrounded several times and had fought its way back toward the right portion of the division sector. During this movement heavy casualties were inflicted on it and eight men, some of whom were wounded, were captured by the Germans.

The right half of the battalion reduced one machine-gun nest after another and, in conjunction with elements of the 18th Infantry on its right, passed through the grounds of the Château Buzancy, and stopped in the wheat fields near the unimproved road 400 yards north of the town of Buzancy. The point reached by this force marked the deepest advance of the division in the operation. The line had now been reduced to a small portion of its strength when leaving the railroad. The excitement of continued combat with German riflemen and machine gunners now died down and the halt in the wheat field found the few survivors nervous and depressed. The line withdrew to within the walls of the château and were fired upon from the château. The next few minutes were busy ones—the château was surrounded—and the combined 16th and 18th Infantry forces captured over 200 prisoners, including a German major, and sent them to the rear under escort of several men with minor wounds. French troops were present on the right of the combined American forces, and assisted in the fighting around the château.

Small groups of Germans were observed moving to the left and toward the rear of this composite force. The officers conferred and decided to withdraw from the château grounds and deploy on a line further to the rear, from which counter attacks could be more efficiently resisted. One of the officers taking part in this action describes the operation as follows: "The troops of both regiments moved to the rear with a view of deployment. No element of our withdrawing troops made any effort immediately to withhold the counter attack. The Germans were rapidly filtering through the wheat toward us in groups of two and three men each. In order to delay their progress and give the remainder of our troops an opportunity to reorganize and deploy I took some twenty men and deployed to the left from the château. Our line extended with the right resting near the château, and joined a small group of



Firing without using their sights.

French soldiers who were stubbornly resisting the advance. The Germans were coming through the wheat on the forward slope of the rising ground under the cover of machine-gun fire which caused me heavy casualties. However, my men, kneeling, had excellent targets, at 300 to 500 yards, as the Germans emerged from the wheat fields and attempted to cross the road. We withheld the counter attack until I was forced to withdraw with only three men remaining, two of whom were lost before we met other American troops."

The composite battalion of the 1st Brigade reorganized in the sunken road 500 yards

west of the château. Here it was joined in the afternoon by the 3d Battalion, 16th Infantry, which had received heavy casualties in reaching this position. Elements of the 1st Engineers also joined this force in the sunken road during the afternoon. The remainder of the day was spent in repulsing several counter attacks and in keeping under cover from artillery and trench mortar shells.

Word was received from the arriving units that relief by English troops would be made that night and all were happy. Later a runner arrived from regimental headquarters with the depressing news that the relief would be made during the following night and not the night of July 21-22. No reasons were given for this change and the confidence of the officers and men in the higher command was again shaken.

An officer going back to regimental headquarters found a salvage detail engaged in saving equipment while scores of wounded remained untended. This officer states: "I walked over several miles of the area we had just fought over and I shall never forget the wails of both Germans and Americans as they lay wounded and the fear of darkness was added to the pain of wounds. I helped some of them as best I could and then ran across an engineer officer in charge of a salvage crew. I personally had a word

battle with this salvage captain who was picking up material on the field when there were wounded not five thousand yards ahead of him. I had the pleasure of telling him that his detail was out of order and getting him and his men to go forward to start the much needed work."

Water was scarce and no food reached the men until morning. The mess sergeant could not find out the location of the battalion from regimental headquarters but determined to find them if he could. He loaded a ration cart full of beef and jam sandwiches and drove on the heavily shelled roads during total darkness—

crossed the Soissons-Paris railroad—kept on and always directed further to the front, finally reached an open field. He stopped, but could hear nothing and see nothing in the darkness. A machine gun crackled to the front and bullets whistled overhead. The mess sergeant knew that he was near the front line so unhitched his mules and left the ration cart in the middle of the field. Daylight showed the cart midway between the German and American lines, and in plain view of both. Hunger overcame caution and foraging details crept through the wheat, then jumped up, grabbed as many sandwiches as they could with one movement and dived for the wheat. This procedure was repeated until the cart was empty, even though a German machine gun was trained at the spot and fired at each fleeting target.

JULY 22. THE FIFTH DAY

No advance was made on July 22. The men were exhausted and there was little inclination for them to push forward while the gap on their left was filled with German gunners and riflemen. The knowledge that relief was due that night—that they had risked their lives for four days and nights and that they had penetrated the farthest into the German position—all contributed to their inertia.

Colonel F. E. Bamford, the commander of the 16th In-



Bandages had to be improvised from undershirts and the like.



fantry, visited this composite unit during the late afternoon and gave directions for the relief that night. Several officers left before dark to act as guides for the incoming units, and after leading the most advanced elements of the 15th Scottish Division to the vicinity of the sunken road joined the composite group for the rearward march. Then the march to the Cutry ravine! The few score men marched along the trails and heavily shelled roads calling out in the darkness, "16th Infantry this way," and the size of the column grew all the way back to the kitchen. Forty-eight men reported in to the kitchen of Company D where a hot meal was waiting for them. Twenty more men joined by daylight, some of whom were probably malingerers, while many had been fighting with other organizations.

The following statistical report gives the most accurate information as to the casualties suffered by Company D, 16th Infantry:

	Enlisted	Officers
Number on Company Rolls	238	6
Number at Jump-off	218	6
Non-Casualties	68	1
Casualties:	150—69%	5—83%
Killed	28—13%	3—50%
Wounded	97—44%	2—33%
Missing (including 9 captured)	25—12%	0

ANALYSIS AND CRITICISMS

The individual conduct of the officers and men of Company D, 16th Infantry, when analyzed in the cold light of technique, leaves much to be desired. Yet the training of this rifle company was certainly superior to, and its experience far greater than that of most of the companies which participated in the action. Moreover it is most likely that should the United States Army engage in future war, no unit will enter its first offensive engagement as well qualified to carry out combat missions as was this company.

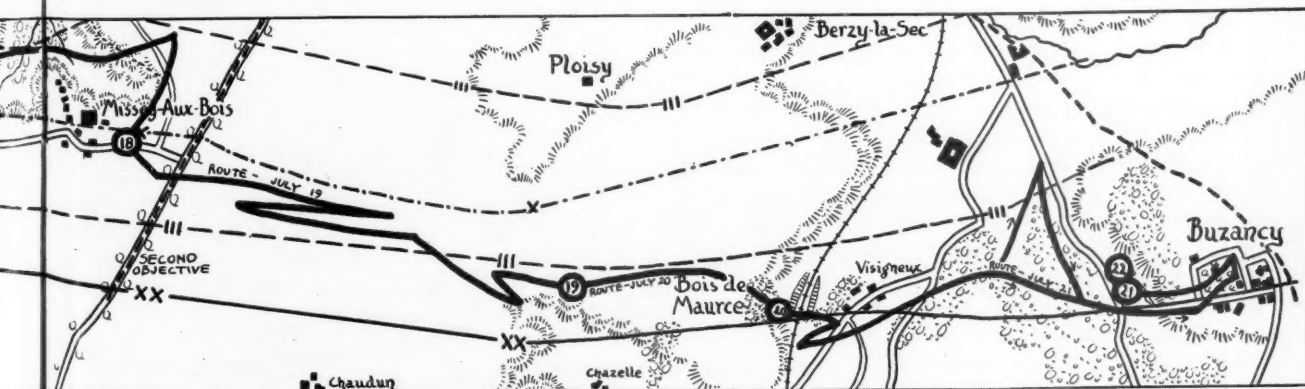
A great deal of the essential combat training of the company was learned on the battlefield. The manner in which machine-gun nests might be reduced had formed a very minor part of their previous training. Battalion, regimental and higher unit maneuvers occupied much of the training period, and, while these could not have been neglected, the training of the squad, platoon and company in tactical exercises had been sadly neglected. The officers and noncommissioned officers had had little opportunity to make decisions for their respective units under assumed combat conditions. It was exceptional for such a unit commander to exercise command of the next higher unit, even under drill conditions. Then came combat—a large percentage of officers and noncommissioned officers were wounded in the early stages. Privates, first class, assumed command of squads (and frequently platoons) which they had never commanded even in close order drill. All along the upward scale of units new and untrained leaders stepped into command and for the first time were required to develop leadership under the most trying conditions.

It is well known that the last stages of combat are by far the most exacting, yet here we find the physical and mental state of the unit at its lowest ebb and most of the leaders are new except for their battlefield training. When we consider the above conditions it is hard to explain why even more mistakes were not made. Too much credit cannot be given to the noncommissioned officers and privates who, by their initiative, bravery, and loyalty, assumed command and led their men onward for five exhausting days. It is true that many grumbled at the hardships and it was hard for them to realize the necessity for the continuous forward push when the numbers in their ranks were so few.

Many men became separated from the company, either through accident or design, yet in no case did I see any



The moral effect of having a bayonet fixed to the rifle.



hesitation when the commander was willing to lead them forward—even though they knew it meant probable death.

The decision of the high command to withhold the artillery barrage and its reprisal fire from the enemy until H hour, met with the hearty approval of the officers of Company D. The advance to the jump-off was beset with enough difficulties, natural and human, so that little time elapsed between our arrival and the jump-off time. Most of the assault units probably would not have reached the jump-off line by 4:35 on July 18 had their advance been further hindered by artillery fire.

The decision of the company commander of Company D to continue in the sector of the 26th Infantry and partially fill the 800-yard gap between the 16th and 26th Infantry was basically sound. A gap of this size between brigades might have been proven disastrous had the front been normally garrisoned; and, as far as the commander of this unit was concerned, enemy reserves might have been encountered at any moment.

The actions of the commander of this company in requiring perfect lines to be kept during those portions of the advance when the enemy was not in contact, except by long-range machine-gun and artillery fire, followed sound troop leading methods. The psychological effect was as follows: the mental effort of the men to keep in alignment, while they were under heavy fire, and the secret amusement of the individual at his leader's idiosyncracies, made the element of personal danger of secondary importance.

The actions of the individuals of the companies, and the officers, in taking no prisoners in the initial stages of combat is difficult to explain. Such occurrences might be attributed to the dominance of animal instinct under these conditions, yet this battle action was characterized by movement against machine guns rather than against personnel. The appearance of the individuals serving these guns was anything but savage. There was a scattering of middle-aged men and pink-cheeked boys among them; yet the men of the company killed without the excitement of hand-to-hand combat—killed, apparently, for the pleasure of killing.

The rifle fire of this company, especially during the first few hours of assault, was very ineffective. A variety of causes may be advanced to explain this; the ranges estimated may have been greatly in error, due to inability to calculate space under combat conditions, with the accuracy of peace-time practice. Many men failed to set their sights properly and this may be laid directly to combat excitement. Finally, many men were observed firing without using their sights—jerking the trigger—or shutting both eyes before pulling the trigger. The rifle fire during the fourth and fifth day's advance was in direct contrast to that of the first day's. Ranges were shorter and the high-strung nerves had relaxed under fatigue from several days of excitement. In addition, the combat was essentially personal during the last phase of the advance,

and the men knew that their lives depended on who got in the first well-aimed shot.

The breakdown of the medical service, both in respect to first-aid assistance and evacuation, placed additional responsibility on the company commander. The medical training of the company commander of this unit, although above average, was inadequate in many cases where men had lost limbs and bandages had to be improvised from undershirts and the like. The construction of emergency litters and splints and the application of the latter fell to this company commander during the numerous halts in the advance.

The unfamiliarity of this company commander with tanks and combined infantry-tank tactics resulted in these valuable aids being used only to a partial extent of their capabilities. The error of the captain on July 19 in mistaking the appearance of friendly tanks resulted in a disgraceful route and the shaking of the morale of the entire battalion.

The German defense of the first three days was characterized by echeloned machine guns. The method of the company commander, and later, Lieutenant Colonel Craig, in reducing these defense groups by patrols, was correct in that the patrols accomplished as much as the entire company could have done, and with much smaller number of casualties.

Lieutenant Colonel Craig was justified, as battalion commander, in personally leading patrols because it raised the morale of a shaken unit. During the first day's advance, when Company D was acting alone, combat patrols were commanded by noncommissioned officers, rather than by the company officers. This is believed to have been the correct action as the company was well under control and all officers were needed in the conduct of the attack of the company as a whole.

It is interesting to study the panic and route of the company and battalion on July 19, when the French tanks were mistaken for enemy tanks. Company D held its position until units in the rear began running away from the front. The movement, starting in the center of the battalion position, swept all in the rear into a fleeing mob. The sight of hundreds of men running, and the awesome words "German tanks" passing along the line, besides



Battle is an unending series of waits.

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The a

shells exploding and bullets cracking overhead, pulled everyone into the current of this stream and made them insensible to reason and deaf to commands. The knowledge that the battalion was powerless against tanks probably played a major part in the quick change of high-spirited veterans into frightened mob members. Officers who are in advanced positions when a unit breaks into panic are powerless to check it. If they remain in one position their sphere of influence is very limited; if they attempt to run to either flank or to the rear—such running seems to indicate to the men, who have held fast so far, that the officer is joining in the route and they too are engulfed in the movement. A group in rear of such a retreat is usually not actuated by the mob feeling of the fleeing band, and can readily check such a movement by forming a line upon which the unit can be rallied.

A diet of hard bread, cold canned beef, and water, is far superior to nothing at all, yet a steady diet of this type, over a period of five days, will not keep men in proper physical shape. The tension of days of combat interferes with digestion and the same unpalatable food, eaten meal after meal, soon loses all appeal—but is chewed up and swallowed to allay the empty feeling around one's waistline.

The liaison between the artillery and front-line troops was uniformly poor throughout the five days' fighting. One artillery observer spent about three hours with the battalion and then left. Several hours after his departure the American barrage fell several hundred yards to our rear and passed directly over our position. Apparently the forward observation posts were not close enough to the front to see the targets which were being fired at, as repeated "shorts" were not corrected. There was a general lack of confidence among the front-line troops in our own artillery. This feeling had developed during our trench warfare operations because of several unfortunate incidents, and no effort had been made to let the man in the assault wave know that the artillery was primarily interested in assisting him in his advance. Most of the men, and many of the officers, viewed the artillery as an allied arm, such as the Air Service, which had an independent mission. True, all knew that our artillery had a mission of helping the advance of the division, as a whole, but there was no feeling that the gun crews were trying to help the individual doughboy in the front line. (NOTE: This lack of coöperation and mutual appreciation was entirely remedied by the splendid support given by our artillery in later engagements.)

The moral effect of having a bayonet fixed on the rifle and ready to use, and the confidence of the individual in his ability to use it against any German, played a big part in the willingness of the assault line to close with German troops. The bayonet was used at various times throughout the operation, yet the writer has yet to unearth a single combat incident of bayonet use in which an aimed shot would not have been surer of results and of less danger to the individual.

The activity of salvage details in collecting arms and

equipment before the wounded were removed from the battlefield is not creditable, either to the agency initiating such work, or to the details which used so little judgment when such conditions were apparent. The story of the activities of these salvage details was repeated and the facts enlarged upon with the result that many individuals came to believe that the higher headquarters valued equipment more than human lives. The effect of such tales on morale is not hard to imagine.

The tales which drifted to the front lines, of men lying where they fell—remaining there through the hot days and cold nights without food, water, or medical attention, and, perhaps worst of all, being alone and helpless through pain-filled hours—certainly did not inspire men to expose themselves to similar fates. The individual soldier cannot be expected to disregard these stark, ugly facts, because some link in the higher headquarters is not functioning properly. As soon as the individual soldier arrives at the belief that his officers—all the way up to and including the division commander—are no longer interested in whether he, personally, is hungry or not, whether his wounded comrades are worth caring for, then does his sense of loyalty to his higher command die and his fighting spirit take wings.

The surviving members of Company D were a silent lot. Any glamour of war, which might have been present, had been dispelled by their experiences. They were distrustful of all those who were in echelons of command in rear of actual combat areas. And the reasonableness of such a feeling can only be understood by those who underwent similar physical exhaustion and the ensuing mental depression of mortal combat.

LESSONS

The lessons to be learned from this company operation are mainly those dealing with troop leading. It is true that most, if not all, of the "recognized principles of war" were illustrated, either by their observance or violation, yet the successes and failures of this company were influenced more by the element of troop leading than by any other. Company, platoon and squad commanders, in the great majority of cases, had their missions assigned, or these missions were so apparent that no necessity for resolving them into their tactical possibilities were required. The principles of war may be used as a basis for discussion of certain tactical, troop-leading and psychological incidents, and several will be discussed under these classifications.

Movement. Tactically, there were no outstanding examples of the violation or observance of this principle.

In the troop-leading aspect, movement, as applied to a unit, means a certain loss of control by the company commander. The company commander must control his four platoons through their leaders and cannot hope to exercise direct control over a deployed company while it is under fire. Direction is difficult to maintain on terrain such as the Soissons area, where much of the advance was over broad fields of wheat. The company commander must physically lead the advance to be reasonably sure that

major errors are not being made and, too often, he finds that direction is still not maintained.

Movement. applied to individuals, will quite frequently afford a tense and apprehensive man a physical means to "let off steam." Personal danger is readily forgotten if the man is required to perform heavy labor. When an individual is inactive and shells are exploding near him he cannot push back the recurring waves of fear; he crouches and waits, and battle is an unending series of "waits," while the soldier is unoccupied.

Objective. The idea of reaching the company objective was firmly fixed in the minds of the entire company and this was often remembered at the expense of cooperating with neighboring units. The acceptance of the idea of the objective was due, primarily, to the desire of the men to get the allotted job done as quickly as possible, and they soon realized that by so doing they stood a better chance of living. Divisional, and other objectives, mean little to the soldier, for he seldom knows that the halting place of the company is an objective, unless he has been told that when a certain line is reached he will be through for the day, or for the engagement.

Simplicity. Most enlisted men, and officers too, cannot remember and execute any but a very simple order when in actual contact with an enemy force, or with enemy fire. A complicated plan for capturing a machine-gun nest will probably fail because someone is almost sure to

forget part of the instructions when actually under fire. Plans which are models of simplicity and which give groups or individuals a concise and definite mission frequently fail for various reasons, but the liability of failure is greatly decreased when simplicity of plan and orders is observed.

Loyalty. The commanders of regiments and higher units cannot be expected to think of death and pain when committing troops to action. They realize that combat will result in the partial or total wrecking of a complex human machine, assembled through countless hours of drill, and they must experience sadness at the necessity for this damage. The commanders, referred to above, know the external appearance of the fighting machine, but do not always realize that its component parts are individuals—all cast in different mental and physical molds—each having an individual reaction to battlefield stimuli. These, as well as all commanders, should realize that morale and loyalty are not inexhaustible, and that the destruction of these forces seriously impairs the fighting power of the entire command. The officer who understands the fears of the newest private, who knows how he is affected by hunger, thirst and fatigue, who knows that the private soldier is not fighting for glory but is merely doing what he is told to do as best he can—that officer will know how much the soldier has to give. And the soldier, knowing he is understood, will gladly give all he has—even his life. Such is Loyalty.

Cottonseed Meal As Feed for Horses and Mules

(From Bulletin, U. S. Department of Agriculture, March 19, 1935)

Farmers in the South, or other areas where cottonseed meal is available at low cost, may feed more of it to horses and mules than has been thought advisable in past years, says J. O. Williams, in charge of horse investigations for the U. S. Department of Agriculture.

Recent experimental work at the Texas Agricultural Experiment Station indicates that it is not necessary to limit horses to only small daily quantities of cottonseed meal, provided the meal is fed as a supplement to pasture and proper roughages. The studies show that in three years of feeding cottonseed meal to horses and mules of various classes no injurious effects resulted. The animals fed cottonseed meal kept in better flesh and vigor and shed their coats better in the spring than those that did not get it.

Although larger quantities have been used, best results are likely to be obtained from feeding between one and two pounds of cottonseed meal daily for each 1,000 pounds of live weight, provided other concentrates are used also. In addition, an idle horse or mule needs about five pounds

of other grain each day, and one doing medium work about six to ten pounds. An animal doing heavy work needs from ten to thirteen pounds of other grain daily. From eleven to thirteen pounds of roughage should be fed daily with these grain rations.

In starting to feed cottonseed meal to work stock, it is desirable to feed only a small quantity and then increase it gradually. Some horses will not relish the meal, and for this reason it is better to mix it with other feeds. Horses are especially susceptible to digestive disorders from eating moldy or spoiled feeds, and good feeders are always careful to safeguard the quality and condition of cottonseed meal. Feeding mixed hay or legume hay, such as alfalfa, lespedeza, cowpea, or clover, is particularly important when no pasture is available. The use of good pasture may save considerable roughage while the animals are working, and good pasture will save from one-half to two-thirds of the grain, as well as hay, when they are idle for several days at a time.

The Fall Maneuvers of the Cavalry School—1934

By LIEUTENANT COLONEL JOHN MILLIKIN, CAVALRY
Chief Umpire

THE annual fall maneuvers of the Cavalry School, held in the period October 10 to October 13, 1934, took the form of a march under rigid field conditions, with the purpose of stressing proper march technique, bivouacs, logistics, animal management, and tactical mobility of horse cavalry as now organized.

Having been conditioned by a series of regimental and separate unit practice marches, the school troops were organized for the maneuver into the Cavalry School Brigade, reinforced, which consisted of Brigade Headquarters Troop (Provisional) from the 9th Cavalry, the 2d Cavalry, 13th Cavalry, 2d Battalion (less Battery F), 18th Field Artillery, Troop A (less one platoon), 9th Engineer Squadron, and detachments of Medical and Veterinary Corps. Student officers were assigned to duty with the units of the Brigade, and the Academic Division of the Cavalry School furnished the brigade staff. Umpire assignments were likewise made from the Academic Division.

On the 10th of October at 7:00 A.M. the Brigade Staff and a representative from each major unit were assembled and received the first control. This indicated the general situation as shown on Map No. 1 and gave as a mission that the Cavalry School Brigade at Fort Riley would at once initiate reconnaissance to discover any hostile troop movements to the north, in the zone assigned. The Blue First Army, under which the Cavalry School Brigade was operating, further ordered that upon reaching designated objectives the Brigade would be prepared to move on short notice to oppose any hostile advance in that zone. At 7:15 A.M. the Brigade issued a warning order for two reconnaissance detachments, each of which consisted of a squadron less a troop, reinforced by a section of caliber .50 machine guns and a scout-car platoon, less a section, to be prepared to move out at 8:30 A.M. It was further indicated that the Brigade, less detachments, would move about an hour later, pending detailed instructions, which were later published in Field Order No. 1 of the Brigade.

The reconnaissance detachments, the right one being furnished by the 2d Cavalry and the left one by the 13th Cavalry, proceeded on their missions, departing at 8:30 A.M., and the main body left Fort Riley at 9:30 A.M. In order that reconnaissance detachments might secure maximum use of their four scout cars, one additional scout car from Brigade Headquarters Troop was attached to each detachment for communication purposes. Each Brigade Headquarters car, being equipped with radio, permitted communication by the detachment with each of its sections and with either Brigade or Regimental Headquarters, and permitted the retention of a complete

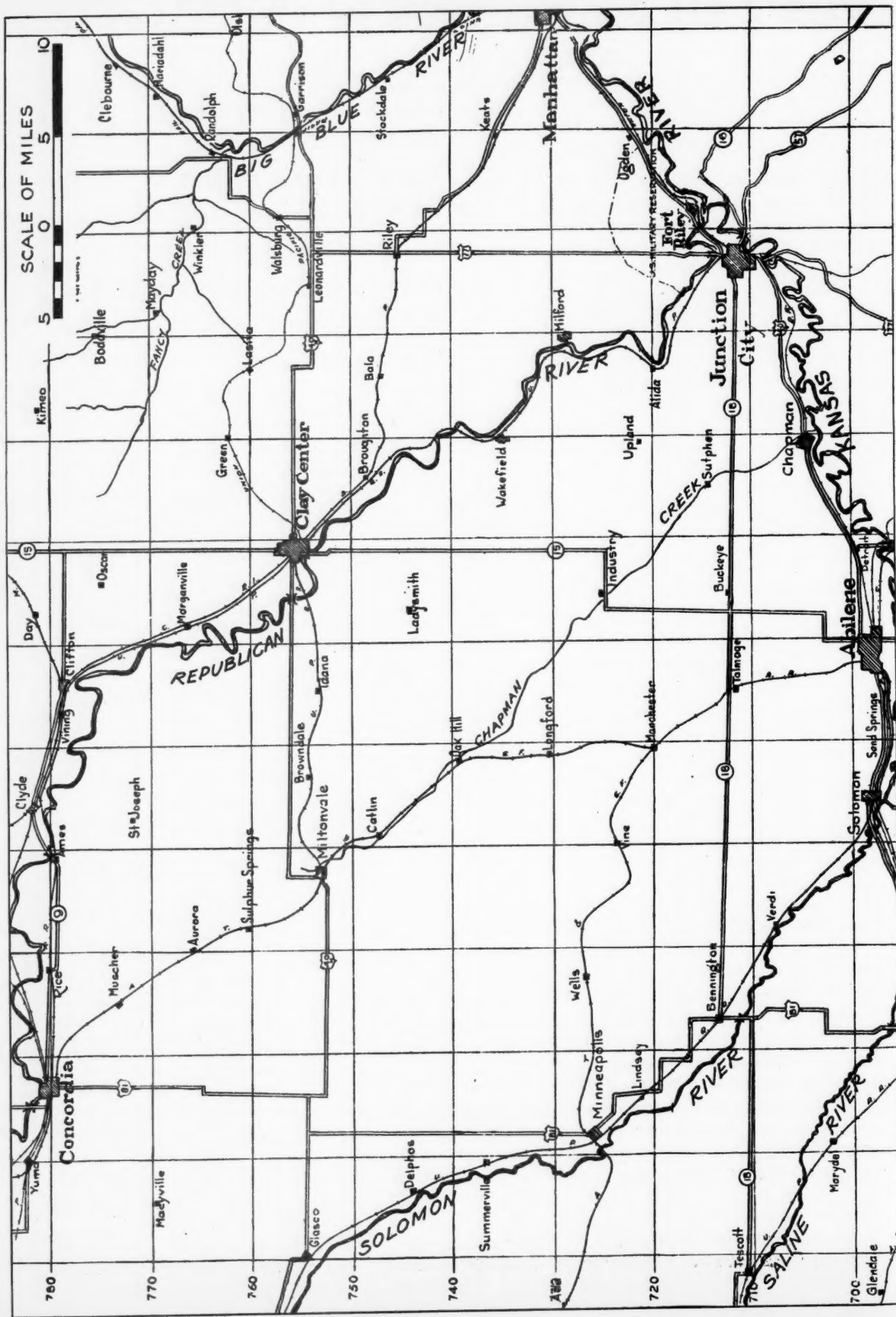
A march under rigid field conditions stressing proper march technique, bivouacs, logistics, animal management, and tactical mobility of horse cavalry as now organized.

section of scout cars for reserve or command purposes in each regiment as needed.

The march was without incident, communications with detachments operated perfectly, and when it became apparent that it would soon be time to go into bivouac, a brigade staff officer was sent, by scout car, on reconnaissance for a bivouac site for the main body, as there was insufficient water and concealment on the immediate route of march. While this reconnaissance was being made, the Brigade halted en route for a period of 45 minutes, during which time grain was fed and lunches eaten.

The command, less its reconnaissance detachments, changed direction one mile south of crossroads 1380 (on U. S. Highway 77) and went into bivouac under temporary outpost on Wild Cat Creek, four miles northwest of Keats. The main body, arriving upon completion of an eighteen-mile march at 1:45 P.M. was immediately followed by the trains. Information received indicated that the reconnaissance detachments had performed their missions, that the right one had gone into bivouac at 1:15 P.M. and the left at 2:45 P.M., as indicated on Map No. 1. By 3:20 P.M. the night outpost for the bivouac of the main body had been completed.

At 4:00 P.M. a message received from the First Army stated that about one regiment of Red cavalry moved west across the Republican River at Clifton this date, followed by Red forces in trucks moving on Clifton and Clyde. (The location of these two towns is 15 and 20 miles, respectively, northwest of Clay Center. See General Map.). It was estimated by the First Army that the Reds would advance south and west of the Republican River, and as a consequence the Cavalry School Brigade was ordered to move under cover of darkness (10-11 October, 1934), to a concealed bivouac, west of the Republican River, south of Clay Center, and await further developments. It was also to be prepared to oppose any Red advance between the Republican River and the Atchison, Topeka and Sante Fé Railroad, from Abilene to Concordia (Concordia lies 33 miles due northwest of Clay Center). The instructions from the First Army further



announced that army aviation would operate north of a general east-west line through Concordia, and that the 4th Cavalry Brigade would take over the present mission of the Cavalry School Brigade at dark, 10 October.

The interjection of the move presented a rather nice problem in staff work, as well as one in the necessary details of technique in leaving bivouac, marching, and arriving at a new unknown bivouac, all after darkness. The command was widely separated into three groups. The new objective was well to one flank, and the new bivouac area had not been reconnoitered. In addition the bridge south of Broughton became of great importance if a movement to the south became necessary.

To meet these requirements, the Brigade immediately issued warning orders to be prepared to march at 8:00 P.M., and messages were sent to both reconnaissance detachments to be prepared to move at the same hour in accordance with instructions to be issued. The left reconnaissance detachment was directed to move after darkness on Broughton, to secure the bridge across the Republican River two miles south of that town. Upon accomplishing this, it was directed to reconnoiter for and secure a suitable bivouac site south of Broughton and west of the Republican River, and cover the change of direction of the Brigade at Broughton. Its scout-car platoon was employed to immediately seize the bridge at Broughton and then keep itself interposed between the Brigade and hostile threats until the arrival of the horse elements of the detachment. Cars were then used to cover hostile routes of approach, to assist in covering the Brigade in its change of direction to the south and into the new bivouac area. The detachment was directed to remain on that duty until relieved by orders from the Brigade.

It is interesting to note the steps taken in the accomplishment of the three delegated missions: the reconnoitering of the camp sites; the methods of security furnished by the scout-car platoons and the two reconnaissance detachments.

Coincidental with issuance of the orders to move on to the new bivouac during darkness, the Brigade Commander directed S-1, accompanied by an officer representative from each regiment and separate unit, to go forward by scout car to contact the detachment commander of the left reconnaissance detachment en route and select the new bivouac area and make all necessary arrangements to conduct units into it upon their arrival. The bivouac party moved out at 6:45 P.M. and arrived at the generally specified location about an hour later. It was quite dark, and the country was entirely unknown to S-1 and his party. S-1 was authorized to require the commander of the reconnaissance detachment to send forward such enlisted personnel, mounted, as Brigade S-1 deemed necessary, to act as guides for the elements of the Brigade upon its arrival. En route S-1 decided he would assign each officer representing a regiment or separate unit his unit area and then give him sufficient enlisted men to have one available to act as guide for each troop or similar organization. He further decided that once the area was desig-

nated the regimental or separate unit representative would be responsible for subdividing his area and issuing the detailed instructions to each guide.

Upon reaching the vicinity of the new bivouac area, which had been indicated in general to S-1 on the map by the Brigade Executive, an umpire present indicated the location of the area the troops would be permitted to use (as per lease arrangements). This area in general consisted of patches of dense woods, separated by cultivated fields, the use of the latter being denied troops and motors.

A detailed inspection was made of the entire area by Brigade S-1 and his party. Areas were assigned units, and enlisted guides were apportioned. Each unit party was directed to complete all details and report ready to guide units quickly and smoothly to their respective areas at a stated time, which was one hour prior to the time leading elements of the Brigade were expected to arrive. At 11:30 P.M. all groups assembled as directed at a point about 500 yards from the entrance to the new bivouac area. Each guide knew the unit for which he was responsible and exactly where it was to bivouac.

It may be of further interest to note the observations of S-1 (Major J. B. Wise, Jr., Cavalry) as to the details of bivouacking the Brigade:

"The time length of the command (Brigade reinforced) less trains in column of twos at the walk was one hour. This had been checked when the Brigade marched from Fort Riley. The leading element, advance guard of the Brigade, reached the entrance to the bivouac at 12:45 A.M. The last element of the command, rear point of the rear guard, was in bivouac at 2:30 A.M., trains being included in this computation. All cavalry units led into bivouac, which eliminated confusion and separation in darkness. The 'guide method' operated perfectly. Sufficient time had been given for the individual guide to become acquainted with the area and routes leading thereto, in darkness, and each unit as it arrived at the entrance to the bivouac area was directed merely to follow its guide. It was found that very few adjustments were necessary within units after daylight, and airplane photographs failed to disclose the presence of any of the troops. Several flights, in fact, were necessary for the planes to even locate the units after knowing the general locations in advance. Considering bivouacking in general, it was found that a battalion of artillery (horse drawn) required about the same space as a regiment of cavalry. Because of the restricted areas necessary in peacetime bivouacs, criticism will invariably result, due to the difficulty units have in making a hasty movement out of bivouacs, and because of the dense concentrations in bivouac areas, which would afford excellent targets for artillery concentrations and various types of attack from aviation."

The scout-car platoon of the right reconnaissance detachment was employed on the right (north) flank of the Brigade to reconnoiter parallel and lateral roads, leapfrogging forward, to move slightly in advance of and abreast of the Brigade. Upon change of direction at Broughton this platoon covered the rear. The scout-car

platoon of the left reconnaissance detachment was employed to reconnoiter in advance of the Brigade and upon arrival in the vicinity of Broughton reconnoitered towards Clay Center and northwest and west of the Republican River to cover the flank of the Brigade, when it changed direction to the south of Broughton, and to furnish protection to the Brigade while going into bivouac. After the Brigade bivouacked, all scout cars were ordered in for the night under cover of the outpost and were sent out again at daylight the next morning. As stated previously, the march of the main body started at 8:00 P.M., and the leading elements (exclusive of the left reconnaissance detachment which had preceded it) arrived at 12:45 A.M., 11 October. The left reconnaissance detachment arrived in the bivouac area and had secured the bridge south of Broughton and the bivouac site at 8:30 P.M. The distance covered by the main body was 22 miles in this night march, making a total of 40 miles for the day and a total of 53 for the right detachment.

The situation on the 11th of October permitted the command to remain in concealed bivouac at Broughton. Advantage was taken of this fact to cause a G-4 reconnaissance to be made of the Clay Center area by field officers of the regiments. These officers were sent out in scout cars (not on reconnaissance missions that day) and made complete reports as to the rail facilities and possibilities for local procurement in the selected area.

On 12 October at 4:00 A.M. a control was issued representing orders from the First Army, which stated in effect that there were no indications of immediate Red advance via Clifton or Clyde, and that reports received indicated that Reds would move troops south by truck from Concordia that day. It was directed, therefore, that the Cavalry School Brigade move without delay to the vicinity of Talmage and there be prepared to oppose any Red advance against Abilene.

A warning order was issued by the Brigade to all organizations at 4:15 A.M., which was followed at 6:00 A.M. by a dictated order for the march of the command. It contained the following information: The command would march at 7:00 A.M. on Talmage via Industry in three columns; the rate of march would be six miles per hour, after breaking into three columns in the movement to the south, and the rear guards of the three columns would clear the first phase line at 8:15 A.M. (Hourly phase lines which the rear guards were to clear were designated.) The center column was designated as the one upon which the other columns were to regulate. The brigade trains, escorted by Troop A (less one platoon), 9th Engineers, were to remain in bivouac until all columns had cleared the initial point, after which they were directed to march under control of Brigade S-4 to Milford and there await orders. On arrival at Milford the supply section of the trains was dispatched by S-4 to the railhead (Fort Riley), where after loading it was to await further orders.

At 10:30 A.M. the command arrived at Industry, where it halted, watered, fed grain, and the troops ate lunch.

En route no hostile detachments in force were encountered, but columns were frequently observed and harassed by hostile mechanized reconnaissance detachments. During the halt at Industry the entire command was protected by an all-around march outpost, which was established immediately upon arrival. In general this outpost furnished protection for watering. An order directing a change of direction in march was also issued at this time, and as units completed watering, they were moved into an assembly area about three miles southeast of Industry. As watering was completed the water outpost was reduced until the outpost consisted of one for protection of the assembly area only.

In the march on Industry the scout cars were again employed well out on the right flank and rear to locate and report promptly any hostile movements to the southeast in the zone assigned to the Brigade. During the watering operations and halt at Industry the scout cars were directed by radio to assist in providing protection for the Brigade. In all of the operations the scout-car detachments were in radio communication with the main body continuously. The missions performed saved mounted elements of the command many miles of marching. The scout cars alone might or might not have been able to furnish all the protection required against an aggressive enemy, but with their mobile and rapid means of communication, important information was furnished the Brigade Commander in ample time to permit him to make necessary disposition of his forces to meet the hostile threat.

In connection with the problem of watering the Brigade at Industry, the observations of Brigade S-3 (Major A. W. Roffe, Cavalry), may be of interest:

"The tactical situation made it necessary to maintain security for the command during the entire period. By a system of march outpost detachments, the command was protected at all times with a minimum of movement of the detachments concerned. The drouth in Kansas during the past summer made watering facilities for a command the size of the reinforced Brigade a difficult problem. Reconnaissance by a brigade staff officer in a scout car early on the morning of the 12th resulted in locating a watering place in Chapman Creek just west of Industry, and that information was radioed back to the Brigade Commander en route, after which plans were made and detailed instructions were sent to commanders of the various columns en route.

"It was estimated in advance of reaching Industry that the time required for watering and the noon halt for feeding grain and having lunch would be about three hours. The time actually required was approximately three hours and fifteen minutes. An unforeseen delay in one column coming in to the watering place added 30 to 55 minutes to the time in which it could have been accomplished. At first glance this seems like a very long time for a command the size of a brigade to take for watering and a noon feed, and it is longer than the situation will permit in many cases in actual campaign. In further explanation of the time required, it might be of

interest to add that the watering place accommodated only one platoon at a time. The march outpost detachments had to be relieved by units which had already watered and then move in at a slow rate to the watering place. The farthest point in the new assembly area was four miles from the watering place.

"The important point to be remembered in connection with this discussion is that where tactical security must be maintained during watering operations for a command the size of a brigade, considerably more time must be allowed than is necessary where tactical security is not necessary."

As stated, during the halt at Industry orders for a change in direction of march were issued. This order was occasioned by the receipt of a message from the First Army reading as follows:

"Our 4th Infantry has secured ABILENE. Movement of our III Corps on CHAPMAN has been delayed. March your command at once on CHAPMAN and await further orders, prepared to hold that vicinity until relieved."

The Brigade was ordered to resume its march at 1:30 P.M. (12 October) and advance in two columns on Chapman. The rate of march was prescribed as six miles per hour, and initial points were indicated southeast of Industry. Marked maps were furnished as indicated on Map No. 2 herewith, and the scout cars continued protection of the right flank. The consolidated field trains of the Brigade (less the supply section) under control of Brigade S-4, were ordered by radio to move without delay on Chapman and there await orders. The supply section of the trains under control of the Supply Officer, 2d Cavalry, was ordered by radio to move directly from the railhead on Chapman and rejoin the trains. Troop A (less one platoon), 9th Engineers, continued as escort for the consolidated field trains of the Brigade until arrival at the new bivouac.

Upon arrival at Chapman at the time indicated on Map No. 2, march outposts were again established, and by 6:30 P.M. the outposts for the night had been completed.

Maneuver conditions ceased at daylight 13 October, and the units of the command made administrative marches back to Fort Riley.

During this exercise the light weapons were not employed. The new trailer type has not yet been received at Fort Riley, and for "recruiting strength" of the troops involved, truck transport alone was ample.

In view of the more or less recent change from animal-drawn to motorized trains, the following observations of the Brigade S-4 (Major C. B. Hazeltine, Cavalry) during these maneuvers are thought to be of special interest:

"1. *Trains.*—a. Prior to the march divide organization field trains into:

"(1) A 'baggage' section which contains baggage, combat equipment, ammunition, etc., which may always be available to the brigade.

"(2) A 'supply' section which contains rations, forage,

fuel, gas and oil and operates daily to distributing points as a shuttle group.

"(3) This can easily be done, starting with the rifle troop as a basis and using one truck for baggage and one for Class I supplies. (This method is well covered in the paragraphs on supply of small units in 'Tactical Principles and Logistics,' The Cavalry School, 1934.)

"b. Detail one of the regimental supply or transportation officers as commander of the combined 'baggage' sections of the column, and one as commander of the combined 'supply' sections.

"c. Instruct the officer in charge of the 'supply' section of the field train that after drawing supplies in bulk he will unit load his train before arrival in bivouac each day.

"(1) This may be done in the vicinity of the railhead or at any convenient place en route.

"(2) This is the most practical way to handle the supplies and will save much time and trouble in the long run. It may require a little more time for the trip, but with the new motor transportation this is negligible. Upon arrival in camp or bivouac it does away with all confusion incident to subsequent issues, permits of immediate release of trains to units concerned, and prevents unnecessary movement of transportation after arrival in bivouac, which is an important factor in avoiding hostile air observation.

"(3) It is particularly helpful when, as frequently happened during the maneuver and will in campaign, a troop or squadron has been sent on a detached mission. Upon arrival of the trains at the bivouac area, the trucks pertaining to the detached unit may be dispatched at once with their supplies.

"d. Always park transportation headed out of camp. This prevents confusion in case of a hasty move at night, when a turn around in the dark is very difficult. This particularly applies in war, or under war conditions, when no lights are permitted and the transportation has been parked under trees to prevent aerial observation.

"e. If there are engineers with the column (as on this march), keep one engineer truck, with personnel and hand tools, at the head of the trains. These will be invaluable in fixing up roads or making trails when going into camp.

"With the ever-present necessity of getting the trains under cover, it is generally necessary to take them off the road when they go into bivouac. It is therefore frequently necessary to do a little work before the trucks can be driven to the desired locations.

"f. Be sure train commanders get pertinent instructions and information that is given the troops. If you as S-4 are not accompanying the trains, be sure the section commanders get a marked map and understand the route and orders.

"g. Always supervise movement of trains into and out of the bivouac areas and emphasize speed in clearing roads.

"h. In tactical situations there are four ways to handle motorized trains:

"(1) Have them accompany the column by bounds.

"(2) Hold them at the old bivouac and march them so as to time arrival at destination with arrival of the troops.

"(3) Hold the trains in a concealed location with orders to join troops under cover of darkness.

"(4) Send the trains to a rendezvous point, there to await instructions.

"(5) In (3) and (4) be sure to furnish guides. In each of the above methods the operation of supply section, when detached, is additional to and coordinated therewith.

"i. With the new motorized trains there is no necessity for using the Division Quartermaster Train as a link in the chain of supply, when the railhead is less than 100 miles distant. Within this distance the present motorized field trains of the regiment can function easily and do away with the extra transfer and distribution of Class I Supplies.

"j. If trains are to move together, S-4 should either accompany them himself or designate one of his section commanders to command the combined trains for the march.

"2. If, as S-4, you do not accompany the supply section on its daily trip to the railhead, then designate some officer (preferably your supply section train commander) to represent you.

"3. For situations in which the railhead is assumed (i.e., actually the post warehouses), it is best to arrange with the Quartermaster, well ahead, to have on hand certain rations and other articles which are desirable, practical, and easily handled in the field; for example, gasoline drums. Also be sure that a 'railhead officer' is designated in the post, before leaving, and that he has the necessary loading details available when your trains arrive.

"4. In planning your gasoline supply remember the Indiana four-wheel, four-wheel drive truck requires a little more than twice as much gasoline as the Chevrolet or Ford V-8. For the third day's operations, the Chevrolets and Ford V-8's required seven gallons each for a refill, while the Indianas required sixteen gallons.

"5. *General.*—The following points should be checked daily by S-4:

"a. See that you get the supplies from the railhead that you ordered in daily telegram.

"b. See that trains are in camp on time and don't get lost.

"c. See that roads are cleared promptly at camp sites.

"d. See that the trains are assembled in their proper groupings and moved under their proper commanders.

"e. Be sure the trains are not moved until proper orders have been received and clearly understood by train commanders, and make sure that train commanders have marked maps, know where they are going, and the route.

"f. If possible arrange for radio communication for both sections of the trains.

"g. When necessary see that proper escort is provided and is familiar with its duties."

The 2d Battalion, 18th Field Artillery, fully demonstrated its ability to maintain the rate of march prescribed, although it was not organized as horse artillery, with the cannons mounted.

Major B. R. Peyton, Field Artillery, who accompanied the 2d Battalion (less Battery F), 18th Field Artillery, as its umpire, has made the following observations, which it is believed should be of special interest:

"The mobility demonstrated by the 2d Battalion, 18th Field Artillery, in the maneuver was an 'eye opener' to me. I believe this is brought out sufficiently when reference data give the day's march for horse-drawn artillery varying from 15 to 25 miles per day with the additional remark that 'under favorable conditions the length of march may be increased.' Compare with this one day's march of 40 miles of the 18th Field Artillery. It was accomplished without any undue fatigue to the animals. The horses in the 18th Field Artillery are certainly not above the average in breeding or conformation of artillery horses throughout our army. In fact, many of them are quite old. These results were accomplished by excellent conditioning and the march technique of the battery commanders.

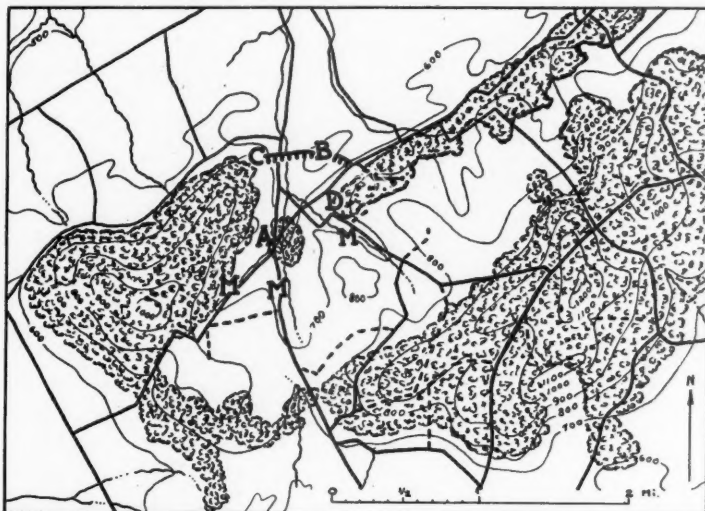
"The terrain for this maneuver is classed as rolling. When the Brigade used one road the artillery had either to trot up hills (which we all know is very trying on animals in draft), or the column had to be elongated to avoid this. This difficulty was obviated, when possible, by marching the artillery on an interior road and permitting it to take its own gaits, so long as it met the requirements of rate of march per hour ordered by the Brigade.

"The artillery was correctly used in the protection of bivouac areas. This was particularly brought out at the bivouac near Broughton. When the Brigade was in bivouac there a battery of artillery was placed in position, data figured for all crossings of the river and sensitive points, so the guns might be used to aid in the repulse of an attack. This was accomplished without any undue hardship on the battery, because after the guns were posted and data figured the men could sleep at the guns and observation post, except a necessary observer and sentry at the guns.

"On all of these maneuvers it is always evident that artillery supporting cavalry should be equipped with the light howitzer. The proper howitzer will occupy less road space, as it may be drawn by four horses instead of six. It also can be placed in position much more quickly, due to the fact that it can fire from almost any artillery position while the 75-mm. gun, due to its flat trajectory, can fire only from certain positions. This necessarily causes a delay in the selection of positions."

NOTE: This article is compiled from notes of members of the Faculty of the Cavalry School who participated in the maneuver, either as members of the Brigade Staff or as umpires.

NOTES FROM THE CHIEF OF CAVALRY



What Would You Do?

"Late in the evening of February 15th, while in bivouac, my squadron of the 18th Cavalry, operating in hostile territory, received orders for a reconnaissance mission to be effective the following morning. For that purpose there were attached a platoon of caliber .30 heavy machine guns, a section of 50's, a radio pack set, and a section of scout cars. My objective was an important river crossing some 70 miles to the northeast. My mission was to determine whether Red troops had crossed at that point, and if so, their composition, strength, and direction of advance were to be reported. Definite report of the results of the reconnaissance was directed to be made not later than noon, February 17th.

"Accordingly, I cleared bivouac early on the 16th via a route that had been indicated. The march was without event, and at about 2:30 p.m., I instituted reconnaissance for a bivouac. Selection having been made of a suitable area, at 3:30 p.m., having marched approximately forty miles, the squadron was in bivouac, with dispositions for security of my command in process of completion.

"Dispositions were made as sketched above. The main body was located in the vicinity of 'A.' I had the advance guard platoon form the outpost to the north, with one-half squad and both of the platoon's light machine guns at 'B'; one-half squad at 'C', the remainder of the platoon at 'D', and designated the line upon which resistance was to be made as one from 'C' through 'B', and extending to the road junction about one-fourth mile southeast of 'B.' From the main body I sent security detachments of one-half squad each to the localities shown as 'M.' Anti-mechanization weapons were retained with the main body in the bivouac area.

"The scout cars had in the interim continued toward

the squadron's reconnaissance objective, which, you recall, was about thirty miles away. They had orders to return to the squadron bivouac at dark. I received a message from the scout-car section commander that a Red cavalry troop was advancing south along my route (north-south road through 'A'), and that at 2:30 p.m. it was about twenty miles away.

"Everything was going nicely. Watering was about completed, cover was adequate, our security detachments were occupying commanding terrain. It would be dark at 6:00 p.m.

"Then, I began receiving reports that certain of the inhabitants were apparently taking an active interest in my dispositions. I sent Lieutenant S. P. O'Naj, my S-2, to investigate. He reported later that the reports were well founded; that in his estimation most of my dispositions were in all probability known, and being in hostile territory, transmitted to proper enemy authority.

"I figured that the Red troop was at that time—4:30 p.m.—about ten miles to the north of my position, presuming that it continued its march. By radio I directed that the scout cars regain contact on their return to bivouac. . . ."

"You know," continued Major Howecome, "I've been reading various situations in THE CAVALRY JOURNAL, and some day I'm going to write this one up."

Up spake the junior present, stating that he had the recorder habit and that he had made, in his own words, a clear and succinct set of notes as to the situation.

"Well, then, let's go on," continued our Major, "you have a rough idea of what it's all about, and in such a situation,

WHAT WOULD YOU DO?"

(For Solution Turn the Page)

SOLUTION

"I decided to move, after dark (about 7:30 p.m.) to another bivouac in the wooded area in the saddle about two miles southeast of the position marked 'A'."

DISCUSSION

"Why? Well, my mission was reconnaissance. That meant to avoid combat in the situation. Of course, my strength was at least double that of the enemy, but what had I to gain? Even to remain in my bivouac area was to invite some difficulty in moving out the next morning. True, the route had been given me, and the Reds were advancing along it. But to sidestep to avoid interference with my mission was entirely justifiable.

"My mission called for a report by noon of the next day. I had watered and fed upon arrival in bivouac, so that the actual location of the halt for the remainder of

the night was of little consequence. By going into bivouac about two miles southeast of 'A,' I was putting myself in position to move out without interruption the next day. It would be necessary to get an early start and push on to my objective.

"The new area could be easily secured with small detachments. By moving to the general area indicated, I could reduce my security detachments to several one-half squads.

"Remember 'Mis-Si-Fut'? You haven't heard of it? Well, it's easy to remember and contains all the requirements for a good decision:

MIS—for mission to be accomplished

SI—for simplicity of action or orders

FUT—for lending itself to future operations.

"All of which dove-tailed in my decision." (Department of Tactics, The Cavalry School.)

Cavalry Leadership Tests for Small Units

DUE to accumulation of funds, principally by reason of the fact that no expenditures for the main event supported by the foundation were made during 1933, it was possible to open the 1934 Cavalry Leadership Test to several widely separated organizations. It still was practicable to maintain the very desirable feature of accurate comparisons of execution for competing platoons and at the same time offer suitable prizes to the winners.

For the benefit of readers unacquainted with the Test and as a memory refresher for those already familiar with this competition, it may be of interest to outline the principal features of the Test.

With keen perception of the best interests of the Cavalry in the direction of training and in a spirit of notable generosity and patriotism, a well-wisher of the United States Cavalry in 1925 offered a prize of one thousand dollars for the promotion of excellence in the training of small units.

The offer was renewed during ensuing years to include the year 1929, when a trust fund was established by the donor which would yield annually a sufficient amount to perpetuate the original plan. Under the terms of the Trust Deed, "The net income so to be paid over and expended shall be applied to promote leadership in Cavalry of the Army of the United States (including in said term the Cavalry of the Regular Army, National Guard, Organized Reserves, and any other organized forces which at any time may be under the control or direction of the United States in time of war), such combat leadership to be promoted by offering prizes for excellence therein, or paying part or all of the expenses of reserve officers or any other officers of Cavalry incurred in attending any training schools, training camps, or maneuvers or by both means, and/or in any other manner which may be deemed appropriate from time to time.

"The Trustee is authorized to apply any income avail-

able for the foregoing purposes to such person as at the time of payment may be the Chief of Cavalry of the Army of the United States, to be expended by him for the foregoing purposes. The Chief of Cavalry of the Army of the United States is requested to expend all amounts so paid to him for the foregoing purposes in such manner as a Committee composed of himself, the Commander of the Cavalry School of the Army of the United States, and such other persons, if any, as they may select to serve with them as a committee may determine."

Due to the pressing demands made upon the Army in 1933, by reason of C.C.C. activities, no competition was held in that year with result that in 1934 there had accumulated a sufficient amount to provide for competition in four separate squadrons, not heretofore afforded an opportunity to participate in the Test.

After conference with the Commandant of the Cavalry School, the Chief of Cavalry initiated training for the Test by preliminary instructions communicated to the several squadron commanders in the following letter:

"WAR DEPARTMENT

"The Adjutant General's Office

"Washington

"June 29, 1934.

"Subject: The Cavalry Leadership Test for Small Units, 1934.

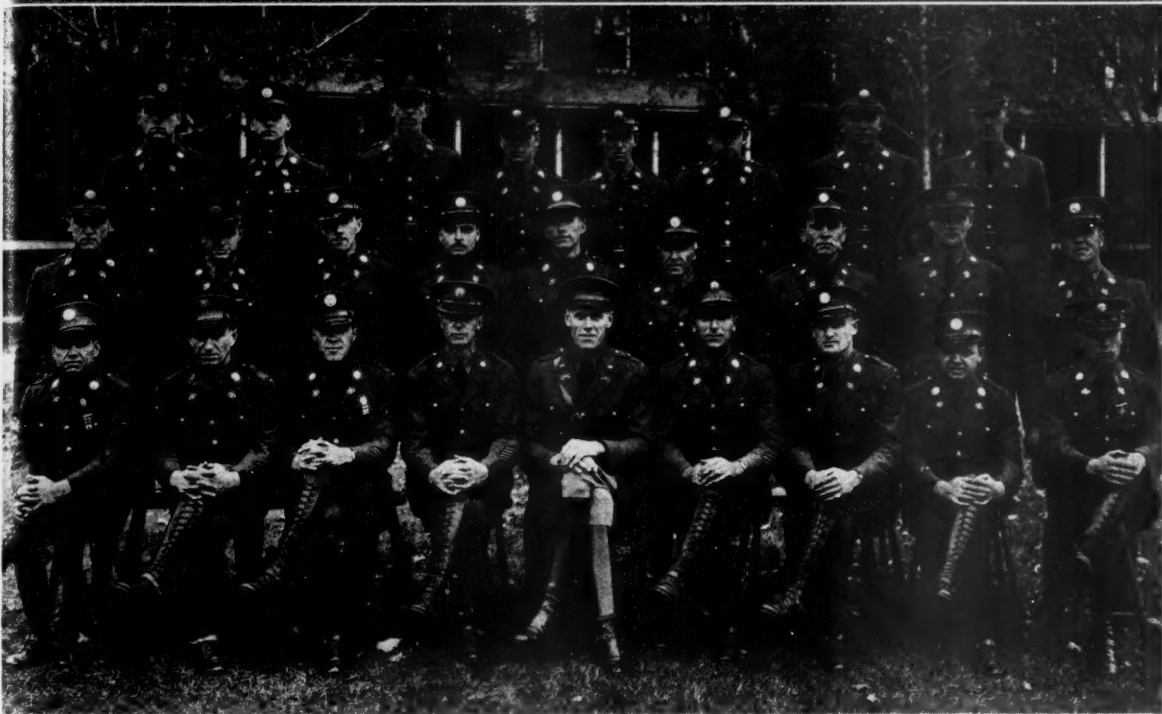
"To: The Commanding Officer, Cavalry

"Through: The Commanding General, Corps Area.

"1. The Cavalry Leadership Test for Small Units, inaugurated in 1925, for the promotion of excellence in the training of small units for combat, will be held for the current year at the home stations of competing organizations at such times between September 1 and November 30, subject to approval by proper authority, as the respective commanding officers of squadrons concerned may

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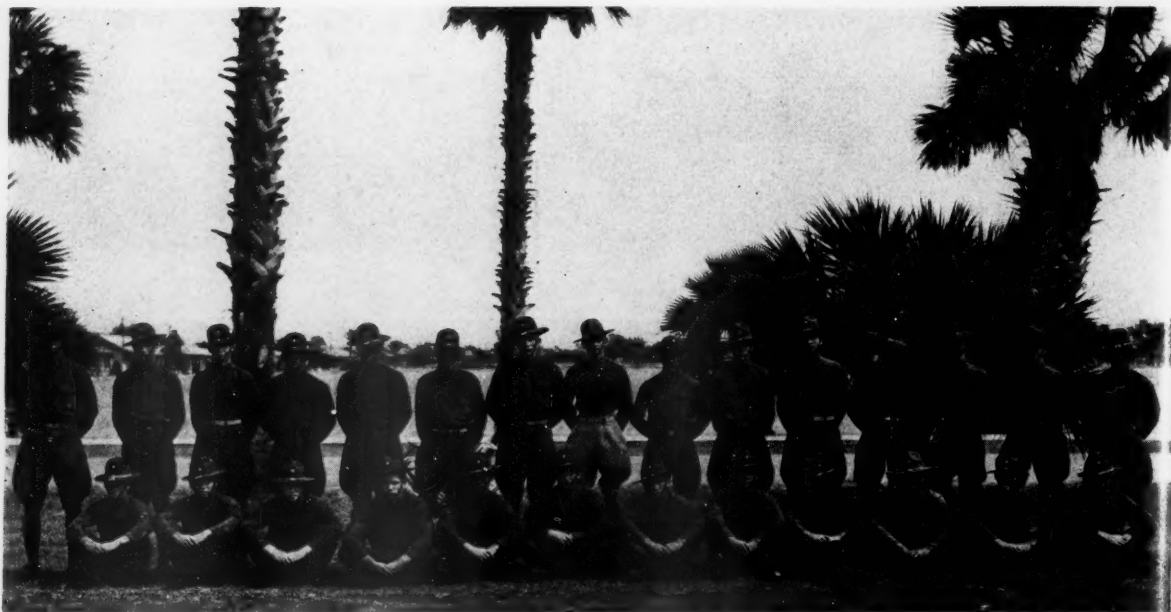


TOP: PLATOON OF TROOP F, 3^d CAVALRY, FORT MYER, VA.

Second Lieutenant Frank S. Henry, 3^d Cavalry, Platoon Leader; Sergeants L. J. Brigante, George E. Bartlett; Corporals James S. Adams, William A. Ferguson, John Roslick; Privates 1st Class Chester E. Archacki, Gordon H. Counselman, William J. Lotz, James N. Nolan, Charles Wilson, Joseph Zientek; Privates William F. Allen, Harley Arwood, Lennie S. Bunch, Rexford M. Burdick, Ralph S. Brown, Lloyd Graham, Harry R. Langham, Robert L. Landon, Archie C. Meade, William B. Newcombe, Patrick E. O'Breine, Paul Rasnake, Nick Soroka, Clyde F. Stouffer, Robert A. Willard, Ralph E. Woodard

BOTTOM: PLATOON FROM TROOP B, 3^d CAVALRY, FORT ETHAN ALLEN, VT.

Platoon Headquarters: First Lieutenant Alan L. Fulton, Commanding; Sergeant Edward F. Towne, Platoon Sergeant; Sergeant William D. Silveria, Platoon File Closer; Private 1st Class William J. Phillips, Platoon Orderly. *1st Squad:* Corporal Morris Hornstein; Private 1st Class Lawrence F. Philbrick; Private Louis A. Deshaies; Private 1st Class Chester F. Thornton; Private Harold Baines; Private 1st Class Andrew Tobathke; Private Robert A. Albert; Private 1st Class William J. Koch. *2d Squad:* Corporal Lawrence J. Decker; Private Leonard C. LeGacy; Privates 1st Class Joseph E. Gourre, Joseph Gietek, Gustave Enko, Donald Kerr; Privates William Gorman, Joseph J. Santora. *3d Squad:* Corporal Walter F. Northrup; Private 1st Class Manuel C. Amaral; Private Leo J. Gagne; Private 1st Class Andrea Ciliberto; Privates Joseph R. Chicoine, Clarence P. Finnegan, Robert E. Kuralt, Eugene V. Boudreau



TOP: 1ST PLATOON, TROOP B, 12TH CAVALRY, FORT BROWN, TEXAS

Platoon Commander: Second Lieutenant Richard A. Smith; Platoon Sergeants: Charles Wells, Wencel Szepeinski; Platoon Corporals: Reece B. McCarty, Harold Roberts, Walter Welsh; Privates 1st Class Thomas J. Burleson, Herman Henderson, Frank V. Johnson, Charlie A. Kiesewetter, Harold A. Leatherman, Richard C. Looney, Jr., Troy F. Maloy, Ira J. Nelson, John A. Setelin, Benjamin M. Thompson, Homer C. Vicars, William J. Walding, Albert T. Ward; Privates Melvin S. Dehart, Louis J. DeJardo, Robert H. Gillespie, John C. Howard, Ralph W. Jones, Rodolphe S. Salas, Felix G. Smith, Dale Soderstrom, Charles B. Wilroy

BOTTOM: 1ST PLATOON, TROOP B, 14TH CAVALRY, FORT SHERIDAN, ILLINOIS

Lieutenant Jules V. Richardson; Sergeants M. A. Gaffney, S. Domitroh; Corporals M. Burke, J. W. Johnston, G. P. Cunningham; Privates R. W. Shelby, J. J. Hoodock, R. S. Brandon, A. L. Keeley, J. F. Baker, F. H. Kroncke, J. O. Lawrence, R. E. Love, S. Wright, L. G. Brown, J. T. Adams, H. M. Hoffman, W. A. Lawton, C. Martinkus, M. J. Mayer, H. D. Olson, F. Kmiecik, A. W. Summers, T. A. Stang, J. C. Knaggs, K. Edmunds, R. F. Krueger

elect. It should be borne in mind that one or more of the troops participating in this Test may be selected by the Chief of Cavalry to compete for the Goodrich Trophy during the month of November.

"2. *General Instructions.* a. Separate competitions will be held for the following organizations:

- 1st Squadron, 3rd Cavalry.
- 2nd Squadron, 3rd Cavalry.
- 1st Squadron, 12th Cavalry.
- 1st Squadron, 14th Cavalry.

b. Each troop of the above squadrons will enter at least one rifle platoon in this competition, strength and composition of which shall be as set forth in subparagraph 2 f.

c. The Test shall be conducted and detailed plans therefor be prepared in each separate squadron by a committee of three officers appointed by the Squadron Commander. Officers selected for this duty should be from among those who have had experience in formulating tactical problems. The committee shall be assisted by such officers as it may require for officials, making application therefor to the Squadron commander, who is designated to supervise the Test.

d. General provisions for the Test shall be published to the troops concerned at the earliest practicable date. Elimination competitions covering the leadership phase (Subpar. e) may be held within the troops if, in the opinion of the Squadron Commander, such are advisable. The firing of ball ammunition will not be included in such preliminaries.

e. The Test shall be divided into two phases:

- (1) *Individual for Platoon Commanders.* To demonstrate the endurance and ability of the officer acting alone; failure to pass a given standard to disqualify for the leadership test. This test shall be drawn up in detail. Officers failing to attain 75% in this test shall be eliminated from further competition.
- (2) *Leadership.* To demonstrate the qualities of prompt decision, aggressiveness and ability of the officer as a leader, as shown by the evidence of proper training of his men. This test shall be drawn up in detail and so conducted as to bring out the above mentioned qualities.

f. Each platoon shall have the following composition:

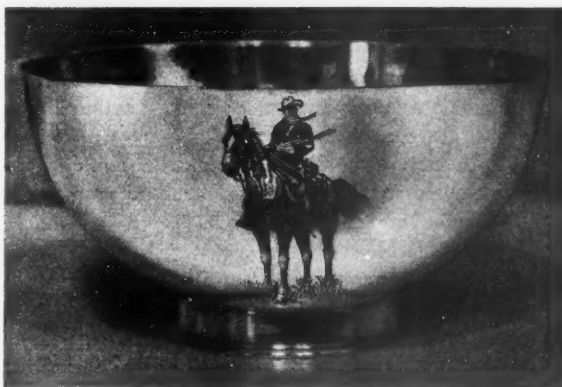
- One Lieutenant.
- Two Sergeants.
- Three Corporals.

Twenty-two Privates First Class and/or Privates.

Qualified substitutes may be permitted, but there will be no change in the composition of the platoon after the Leadership Test starts.

g. *Weights.* The two phases shall be weighed in about the ratio of one for the first to three for the second.

h. *Winner.* Officer and platoon securing the highest aggregate number of points.



Platoon Commander's Trophy

i. *Prizes.* Prizes in each squadron will be awarded and forwarded by the Chief of Cavalry as follows:

- (1) To the Platoon Commander, a piece of silver suitably engraved (value \$75.00), to be selected by the Chief of Cavalry.
- (2) To each Sergeant of the winning platoon, \$28.50.
- (3) To each Corporal of the winning platoon, \$20.00.
- (4) To each Private First Class or Private, of the winning platoon, \$14.00.

j. *Reports.* The Board charged with the conduct of the Test shall forward a copy of its report at the earliest practicable date to the Chief of Cavalry. This report shall include:

- (1) Copy of detailed instructions.
- (2) Copy of rating sheets.
- (3) Personnel of competing platoons.
- (4) Two photographs of winning platoon.
- (5) Recommendations, including those for future tests.

"3. *Desirable Conditions.* In drafting conditions for the Test it is desirable that the following be included:

a. Full field equipment for officers and men, including rations and forage. No vehicles or pack animals to accompany.

b. Competing units to be considered as operating in enemy territory.

c. Hostile Cavalry and planes active in vicinity.

d. A march of from 20 to 60 miles.

e. Several tactical situations, at least one of which involve combat with ball ammunition.

f. At least one situation where the platoon actually goes into camp.

g. Part of the operation to be carried out under cover of darkness.

h. That platoons operate over the same ground under like conditions.

"4. *Items that should be noted:*

- a. March discipline.
- b. Gaits.
- c. Map reading.
- d. Condition of equipment and its adjustment.

- e. Security measures adopted.
- f. Orders how given (promptly, clearly, etc.).
- g. Tactics (vigor, rapidity, spirit to win, use of maximum force at critical point, objective kept in mind, simplicity, security, mobility).
- h. Selection of camp site (water, sanitation, security against observation and surprise, defense possibilities).
- i. Care of animals on the march.
- j. Etc.

"5. For the assistance of the Board in preparing for the 1934 Test, a copy of the conditions governing the 1932 Test for the 11th Cavalry is forwarded herewith. This should be returned to the Chief of Cavalry after it has served its purpose. It should be utilized by the Board as an aid, but not as a guide to be closely followed. The ingenuity of the Committee in the preparation of the detailed instructions and rating sheets is to be encouraged with view to enhancing the value of Test from year to year. While the number of competing platoons is necessarily limited in the present instance, it must be impressed on all concerned that every effort should be made to conduct the Test so as to develop the highest military qualities in the competitors involved. The platoon commander must be thoroughly tried out under circumstances which require rapid decisions based on sound tactical reasoning; the platoon as a whole must be subjected to conditions which require prompt and intelligent response to the demands made upon it.

"6. *Live Ammunition.* One or more combat situations involving the use of rifle and pistol ammunition should be made a part of the Test. Due consideration must be given to safety conditions. A credit of 2,000 rounds .30 caliber and 400 rounds .45 caliber ammunition will be set up with the Post Ordnance Officer for use during the Test, to be divided equally among the competing platoons.

"7. *Publicity.* The results of the Test may be published locally but are not final until approved by the Chief of Cavalry. Under *no circumstances* will the name of the donor of the prizes for the Test, although generally known throughout the Cavalry arm, be used in connection with the Test. Such is the emphatic desire of the donor.

"8. Where it is impracticable to carry out the letter of these instructions, due to lack of available personnel and like reasons, the Squadron Commander is authorized to use his best judgment in departure therefrom, but only in such particulars as are clearly not mandatory.

Adjutant General."

Under the above directive comprehensive tests were prepared in each instance which are exemplary demonstration of the interest taken in the event.

All tests were held on schedule and the following were declared winners:

- (1) A platoon of Troop B, 3d Cavalry, Commanded by First Lieutenant Alan L. Fulton.
- (2) A platoon of Troop F, 3d Cavalry, Commanded by Second Lieutenant Frank S. Henry.
- (3) 1st Platoon, Troop B, 12th Cavalry, Commanded by Second Lieutenant Richard A. Smith.
- (4) 1st Platoon, Troop B, 14th Cavalry, Commanded by Second Lieutenant Jules V. Richardson.

All competitions called for a high degree of preparation on the part of all participants, and demonstrated conclusively the qualities of leadership required in the platoon commanders. The competition furnished an incentive and impulse to conditioning and training that is of incontestable value to the service. The reports rendered by Squadron Commanders were unqualified in their approval of the competition as a medium of training.

Meeting of the U. S. Cavalry Association

At the annual meeting of the Cavalry Association in January, it was suggested that Cavalry officers in the vicinity of Washington should meet from time to time to discuss matters of interest to the Cavalry and thus keep in touch with many of the current questions of organization and doctrine under consideration. The suggestion having met with favor, a committee was appointed by the presiding officer to arrange a program to decide upon a date.

The first meeting, which was held at the Army and Navy Club on April 1st, brought forth an attendance of about fifty-five officers and proved a great success. The first speaker was the Chief of Cavalry, General Kromer, who discussed the actual status of mechanization and motorization in the Cavalry. After commenting briefly on the lessons learned last year at the Fort Riley maneuvers, he discussed the increased capabilities of horsed Cavalry, resulting from the addition of scout cars, .50 caliber machine guns and the motorization of the field trains.

Lieutenant Colonel C. L. Scott, the head of the Matériel and Equipment Section of the Office, Chief of Cavalry, then described the various types of mechanized vehicles, with their powers and limitations, including in his discussion vehicles now on hand and those contemplated; he discussed the mechanical difficulties that have to be overcome prior to procurement and even after vehicles have been issued.

The concluding speaker, Lieutenant Colonel Adna R. Chaffee, of the War Department General Staff, has participated in the development of mechanization from the first and served with the 1st Cavalry from its reorganization as a mechanized regiment up to and including the maneuvers held at Fort Riley, last spring. Colonel Chaffee traced the history of the mechanized regiment from its inception on through to its present state of development and gave a very clear and interesting description of its control and tactical employment.

After the discussion which followed, the Chair appointed a committee to prepare a program for another meeting.

BOOK REVIEWS

ULYSSES S. GRANT: THE GREAT SOLDIER OF AMERICA. By Colonel Robert R. McCormick. Appleton-Century Company, New York, 1934. \$5.00.

This new book on Grant by Colonel Robert R. McCormick is the outcome of a long cherished interest in the slight, both real and literary, accorded Grant during his lifetime and since then by critics and historians. Colonel McCormick's deep convictions on the subject, and his always brilliant and sometimes rather sharp pen, make of the book a bright and stimulating record of events which all too often are allowed to become merely a drab recounting of military history.

Colonel McCormick makes no attempt to write a history of the Civil War, or even a complete biography of General Grant; the book is rather a delicately executed pattern of the politics and policies of the middle 1800's which directed Grant's destiny, and a revaluation of his character and military ability, which came so amazingly to the fore when events called him back into the service. Colonel McCormick's own military background, his long political and editorial experience, and his ability to write with ease and clarity of events clouded in dispute and prejudice, peculiarly fit him to detect and emphasize the relevant points of a long and bitter struggle in which political expediency and the trend of public opinion too often formulated policies that rightly should have been the prerogative of the military high command. The author is frank in his comments, and refreshing in his willingness to discard old traditions and dicta and stand firmly by his faith in the greatness of the generalship of this plain and unassuming American soldier. He compares the exploits of Grant with the great captains of earlier wars, and brings his hero out on top every time, grandly summing up his career, as compared with the great Napoleon's, by saying, "Napoleon found a great army and great generals, and left neither. Grant found neither, and left both."

The author claims that Grant alone, of all the famous military men of history, rose to his exalted position by "demonstrated merit" and not by means of a propitious marriage, family, wealth or political intrigue. He supports his claim of Grant's great merit by devoting a chapter of his book to interesting and detailed accounts of each of Grant's campaigns from the time he was a Quartermaster officer in Mexico, to the days when he commanded the entire army of the Union.

The book contains 30 well executed battle maps in color, so simply plotted and so plainly captioned that the lay reader can follow the author's arguments in favor of Grant's generalship; at the same time, they are sufficiently comprehensive for the study of the campaigns by a military student. The footnotes are of interest to both the casual reader and the student.—LOUIS J. STORCK.

AMERICAN MILITARISM. By Captain Elbridge Colby. The Society of American Military Engineers, Washington, D. C., 1934. 112 pages. \$1.00.

In *American Militarism*, Captain Colby uses four battles of our wars to show the utter wastefulness in lives and money of our usual military policy, and two other battles to illustrate by contrast the results of employing well-trained and organized armies. Long Island, Bladensburg, First Bull Run, and Santiago, simply and clearly recounted, and devoid of the usual palliations and heroics of school book histories, from the first group; and Gettysburg and the Meuse-Argonne, the second.

The story an honest account of these battles tells is so plain that it hardly needs, for the military reader, as much comment as Captain Colby gives. Nevertheless, an old story well retold makes good reading; and certainly the full tale of our almost insane negligence of preparedness as first brought out in Major Ganoe's *History of the United States Army* can bear any amount of repetition until the lesson is learned.

Captain Colby moreover has addressed himself to the general reader and not particularly to the military. It is to be hoped that other serious historical studies come from this author, for he proves in this small book not only that a million men do not spring to arms overnight but also what we far too rarely find—that accounts of campaigns and battles can well form both stirring and interesting narratives without the least loss of accuracy in their telling.—JOSEPH I. GREENE.

R. E. LEE. A biography, by Douglas Southall Freeman. Charles Scribner's Sons, New York. Volume I and II. 1,297 pages. \$7.50.

The character of "Ol Marse Robert" lends itself so readily to apotheosis that his biographers, almost without exception, have been led to commit the unpardonable biographical sin of hero-worship. We are confronted invariably with a Lee who doubtless once lived, but whose actual *living* character has been obscured by the unfortunate tendency of his recreators to exalt rather than portray.

Dr. Freeman's literary autopsy, conducted with scientific impartiality, reveals definitely and for the first time the authentic Lee. It is possible to make this statement despite the fact that only two of the projected four volumes are at present available to this reviewer.

Two decades of intensive research by the author has made for an elaborate presentation and detailed documentation; but never once does Dr. Freeman lose his sense of perspective, his clarity, or his continuity of incident. Wherever possible, moreover, the author adheres to the military terminology of the Civil War period, but when such adherence engenders obscurity through loss of

the term's original significance, he adopts the language of modern war.

Dr. Freeman is victimized by no spasms of imaginative insight. He brutally destroys the very pretty illusion, conjured up by fanciful biographers, that Lee spent the greater part of a night at Arlington wrestling with the motives that might lead him to alliance with the Federal Government or with his native state Virginia. The author points out unromantically but truthfully that Lee's mind was already made up before he left his post in Texas. Even more significant is Dr. Freeman's explanation of a certain defect in Lee's character that cast a dark shadow over his martial genius. Lee, bred and raised in aristocratic Virginia, was too fine a gentleman for the business of war. He was too considerate, too easy. He would attempt persuasion but never compulsion.

Perhaps Dr. Freeman's greatest departure from precedent is his treatment of the military campaigns. To quote from the Preface "For military history, in general, may fail to be instructive because, paradoxically, it is too informative." And in making this statement, then vigorously adhering to it by conducting his narrative in the original "fog of war," the author wrote what is probably the greatest military biography in the history of American letters but one which probably will have no great popular appeal because it presupposes a rather thorough knowledge of the Virginia campaigns for complete understanding on the part of the reader.

The "fog of war" method has certain rather obvious advantages. At a given moment the reader is just as ignorant as Lee of the strength, the size, the strategic movements of the enemy. As the information drifts slowly into headquarters, the reader has the privilege of watching Lee in his analysis of the intelligence, his weighing of the alternatives, and finally the formation of a plan of action. The reader may even have the vicarious satisfaction of substituting himself for the Confederate leader and of working out the problems as they present themselves. Furthermore, the "fog of war" method heightens the suspense and gives a vivid picture of the genius of Lee.

D.P.H.

THE KING OF BATTLES. By Major General Harry Gore Bishop, Chief of Field Artillery. Houghton Mifflin Company. Boston, 1935. \$2.00.

The King of Battles, an exposition of the art and science of Field Artillery, written by the late Major General Harry Gore Bishop, Chief of Field Artillery, combines breezy treatment with brilliant and lucid explanations of subjects which too often prove stumbling blocks to those out of contact with the Field Artillery. The author's facile manner of imparting information prevents this book from becoming a text—it is far too interestingly written. A perusal of this book will not make a field artilleryman of the reader, but should help him along the road thereto.

THE GHOST OF NAPOLEON. By Captain B. H. Liddell Hart. Faber and Faber, 1934, 7s., 6d.

In discussing the influence of Napoleon on the "unbalanced theory of war which hypnotized the dominant minds of Europe" prior to the World War, Liddell Hart draws a distinction between Bonaparte and Napoleon. "General Bonaparte applied a theory which created an empire for him. The Emperor Napoleon developed a practice which wrecked his empire. And, a century later, evolved by Clausewitz into a system, it brought down three other empires in collapse."

Napoleon's conduct of war, from 1806 onwards, was influenced by the superiority in numbers which he enjoyed. "If he still exploited mobility he unconsciously pinned his faith to mass and subordinated his art to his weight."

Maurice, Count of Saxony, better known as Marshal Saxe, "deserves to be considered first in the chain of thought that culminated in Napoleon." "By his explosive criticism, detonated from so powerful a source, he cracked the casing of professional convention, making it possible for more humble students to express their thought and develop a critical examination of the methods of warfare. Thus to him may be traced the outpouring of thought which followed in the next generation and became more clearly the source of Napoleon's profit. Saxe cleared the way for those great changes to which . . . men like Bourcet and Guibert paved the way."

Liddell Hart calls Bourcet "the Organizer of Dispersion" ("calculated dispersion is often the only way to effective concentration") and Guibert "the Prophet of Mobility." The latter's influence is evident in the writings of du Teil, who was commandant of the Artillery School at Auxonne when Napoleon was a student there, and commander of the artillery of the Army of Italy, with Bonaparte as assistant, ". . . it was under the cloak of du Teil's authority that Bonaparte applied the principle of concentrating fire on the key points with a success that led to the capture of Toulon and made his own name, thanks to du Teil's generosity in giving him the credit."

Du Teil, basing himself on Bourcet as well as on Guibert, "had pointed out the value of preparatory distraction, of the reunion, of forces, of the surprise concentration of strength against a weak part, of the maneuver against the rear, and of activity as the means to reconcile these forms of surprise with one's own security." Napoleon had the executive genius needed to translate this theory into living fact.

The movement of post-Napoleonic military thought was guided by Jomini and Clausewitz. "And by the irony of fate, due to a subsequent turn of history, the more faithful of the two interpreters was eventually eclipsed by the other. It was Clausewitz, an original thinker with a Napoleonic tinge, whose thought moulded the mind of the generals and statesmen who made war in 1914, not Jomini, the actual assistant of Napoleon."

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"By its grip on European thought and the bias it gave to such thought, the philosophy of Clausewitz helped to bring about the World War. His dictum that 'war is the continuation of policy' became a catch-phrase impulse to pursue a warlike policy. Again, in the critical days that preceded the decision for war, his theory acted as a check on impulses to maintain peace. Statesmen in the several countries, handicapped by their own ignorance of war, had to give way to 'military reasons' that had no foundation in reason. Thus, having been brought into war, they were held helpless in its grip by the 'absolute' conception. The formula of war to the utmost was ceaselessly recited by their military advisers, and at each repetition of the sacred name of Clausewitz the statesmen bowed their heads. So they continued, rigid in their determination, to the point of common exhaustion. Never, surely, has a theory had so fatal a fascination."

The advocate of mass, Clausewitz concentrated mentally on the campaigns of Napoleon, rather than on those of Bonaparte. Liddell Hart finds that his followers, the European military chiefs, were very slow "to develop the latent superiority that mechanical invention increasingly offered." At this point any reader at all familiar with Liddell Hart's writings will get the impression that it is only another document in substantiation of his favorite theory of complete mechanization. However, whatever may be one's views on this theory, the reader will have to admit that Liddell Hart has developed his point logically. "Even in the twentieth century the generals would train their masses for the bayonet-fight which Guibert, in the eighteenth century, had pointed out as a fantasy of theorists. In reality it meant that they were training their masses to be massacred by machine guns."

The author condemns the French theory of the offensive at all costs. This, also, has a familiar ring and is reminiscent of *Foch, the Man of Orleans*. It is, however, correctly placed in the development of his theme.

"What is the message of this mosaic of history? What is the true moral that we should draw from it? The increasing influence of science on war, and the consequent acceleration of change, together with the fact that the military sphere has become more inseparable from the wider national issues in war and peace, clearly indicate the need for intellectual ability in the higher posts of the Army equal to that of leaders in other spheres."

REVOLT IN THE DESERT. By T. E. Lawrence. Garden City Publishing Company. \$1.00.

This is an entertaining account of the young British Intelligence officer who was adviser to Feisal (who became King of Iraq after the World War), and who was a daring leader of Arab irregulars against the Turkish railroad communications. Coöperating with Allenby, his forces entered Damascus ahead of the British; Lawrence established a provisional government in that city. Severely criticized by some for this initiative (on account of its political complications) and for being more interested in

bushwhacking than in the capture of Medina, he, nevertheless, impressed no less a person than Captain Liddell Hart to the point of being seriously considered by that author as desiring to be classed among the Great Captains.

The brain convolutions of any occidental who can approach understanding of the oriental mind are bound to differ materially from those of the ordinary Anglo-Saxon. One gets the impression that Lawrence was much more Arab than English. That he is a very original person is borne out by the following correspondence between him and his publishers, Doubleday, Doran and Company; it is a whimsical classic:

PUBLISHER'S NOTE:

It seems necessary to explain that the spelling of Arabic means throughout this book varies according to the whim of the author.

The publisher's proof reader objected strongly to the apparent inconsistencies which he found, and a long and entertaining correspondence ensued between author and publisher. The author's attitude can best be judged from the following extracts which show questions and answers in parallel columns.

Q.

I attach a list of queries raised by F. who is reading the proofs. He finds these very clean, but full of inconsistencies in the spelling of proper names, a point which reviewers often take up. Will you annotate it in the margin, so that I can get the proofs straightened?

A.

Annotated: not very helpfully perhaps. Arabic names don't go into English, exactly, for their consonants are not the same as ours, and their vowels, like ours, vary from district to district. There are some 'scientific systems' of transliteration, helpful to people who know enough Arabic not to need helping, but a wash-out for the world. I spell my names anyhow, to show what rot the systems are.

Rather!

SLIP 1. Jeddah and Jidda used impartially throughout. Intentional?

SLIP 16. Bir Waheida, was Bir Waheidi.

SLIP 20. Nuri, Emir of the Ruwalla, belongs to the 'chief family of the Rualla.' On Slip 33, 'Rualla horse', and Slip 38, 'killed one Ruelli'. In all later slips, 'Rualla.'

SLIP 28. The Bisaita is also spelt Biseita.

SLIP 47. Jedha, the she camel, as Jedhah on Slip 40.

SLIP 53. 'Meleager, the immoral poet.' I have put 'immortal' poet, but the author may mean immoral after all.

SLIP 65. Author is addressed 'Ya Auruns,* but on Slip 56 was 'Aurans.*'

SLIP 78. Sherif Abd el Mayin of Slip 68 becomes 'el Main, el Mayein, el Muein, el Mayin, and el Muein.'

In the face of such replies to the publisher's well-intentioned questions, further expostulation was clearly impossible.

*Native pronunciations of the name *Lawrence*.

Why not? All one place.

Should have also used Ruwala and Ruala.

Good.

She was a splendid beast.

Immorality I know. Immortality I cannot judge. As you please: Meleager will not sue us for libel.

Also Lurens* and Runs*: not to mention 'Shaw.' More to follow, if time permits.

Good egg. I call this really ingenious.

RIDING FORWARD. By Captain V. S. Littauer. William Morrow & Co., New York. Price \$2.00.

From his broad experience as an instructor, the author realizes the necessity for a beginner to appreciate that there is a vast difference between a horse and a piece of machinery.

Captain Littauer presents the nature and reactions of the horse in a simple way which leaves no doubt that riding is as much mental as physical. Defining riding as "The horseman's ability to get from his mount the maximum of what it can give, without any waste of energy, on the part of the rider or of the horse" he describes the methods for the accomplishment of this clearly and concisely.

Written by an advocate of the forward seat, *Riding Forward*, with its ample illustrations, contains an excellent description of the forward seat and the practical application of its principles. The final chapter describes a simple method for learning to ride without the services of a professional instructor which makes this book invaluable to the beginner.

THE CASE FOR MANCHOUKUO. By George Bronson Rea. D. Appleton Century Company, New York. 425 pages, illustrated, \$3.50. (Reviewed by A. Kojassar, Mr. Sgt. Cavalry.)

The case for Manchoukuo is preëminently "the case for Japan." A fervent apologist for the Japanese penetration into China, an eloquent pleader for Nipponese political aims and world aspirations, Mr. Rea offers the reader a complete and detailed analysis of recent world stirring events in China. The author, who has resided in the Far East for the past thirty years, has served as an adviser to many Chinese statesmen and is at present officially connected with the foreign ministry of Manchoukuo, is singularly well equipped to discuss the controversial racial and political questions in the Far East.

The worth of this book, as far as this reviewer is concerned, does not depend on the success or failure of its intended goal, namely a complete defense of the rôle of Japan in the recent events in China. To many, Mr. Rea's plea that justifiable fear of China or the Soviets inspired the Japanese sponsorship of the puppet state of Manchoukuo may not be entirely convincing. To others, the systematic penetration of Japan into China may be interpreted as a clear-cut policy of Japanese imperialism: Korea—1910; Manchoukuo—1932; Siberia—? To a greater number of readers Japan's violation of the Nine Power Treaty, whether excusable or not and on whatever grounds, runs counter to America's cherished policy of Open Door to China dating back to the days of John Hay.

The chief merit of the book to my mind, consists in its array of facts and figures seeking to demonstrate that

international policies in China have been comedies and tragedies of errors. Both before and after the signature of the Nine Power Treaty there has always been a lack of accord and singleness of purpose, there have been jealousies, subtle rivalries and flagrant discords among the nations of the white race in their dealings with China. The political rivalry existing between Russia and Great Britain since the "testament" of Peter the Great found its repercussions in the Far East, as well as elsewhere. Of all nations, the United States proved herself the most disinterested and generous in dealing with China. However this country alone cannot safeguard the territorial integrity of China nor bring financial and political order out of chaos.

In the above circumstances, Japan a strong nation with a well defined policy seems to be in an excellent position to attempt the establishment of a Monroe Doctrine of the East.

Time alone can tell what current events in the Far East will lead to, but any one who desires to have a clear perspective of the racial and political cross currents of the East should by all means peruse this authoritative book.

DULL KNIFE. Privately published by the author, E. A. Brininstool, 330 No. Poinsettia Place, Hollywood, California, 1935. \$1.00.

This is the story of an Indian chief who was a superior fighting man. Captured in 1876, Dull Knife's band of northern Cheyennes—which had intermarried with the Sioux—wished to live on the same reservation with them in Nebraska, but the government, thinking it too dangerous to leave two such great Indian generals as Crazy Horse and Dull Knife together, decided to send the Cheyennes to the Indian Territory. The climate did not agree with them, so they quietly pulled up stakes and journeyed northward. Many troops were sent out to intercept them, but, by persistent long marches, and some sharp fighting, Dull Knife and his followers reached the Nebraska sandhills. Here he was captured by Captain J. B. Johnsen with the cavalry from Fort Robinson.

It having been proposed to return the Cheyennes to the Indian Territory in the dead of winter, Dull Knife and his band escaped with the aid of rifles which they had hidden under the floor of the barracks where they were confined. Pursued among the sandhills, they made gallant resistance until they were practically exterminated. Dull Knife had managed to elude his pursuers and actually joined Sitting Bull in Canada. They returned to the United States together, and Dull Knife died at the Tongue River Agency, Montana, a few years later.

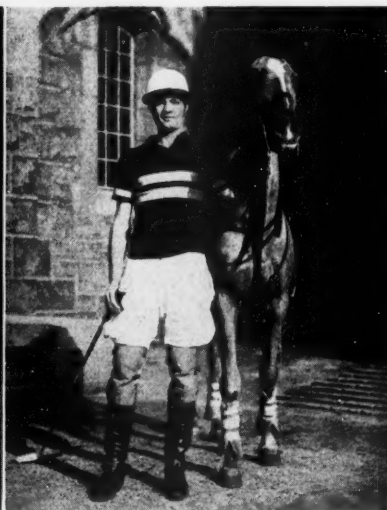
The author paints a stirring picture of this intrepid Indian, who fought so gallantly for the privilege to live where he wished and who was the victim of the relentless inroads of the whites.

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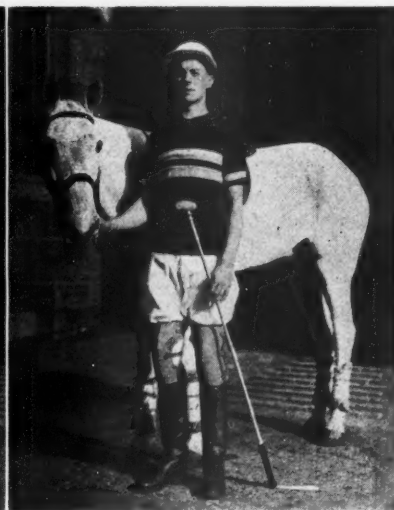
SPORTS



Cecil Combs, No. 1



Howell Estes, No. 2



Harry Wilson No. 3 (Back)

West Point Wins Indoor Intercollegiate Polo Championship

SUCCESSFULLY completing an undefeated season, the Army polo team with Cecil Combs at No. 1, Howell Estes, No. 2, and Harry Wilson, back, won the indoor Intercollegiate title last Saturday night, March 30th, by a close victory over Yale. For the first time the tall Intercollegiate cup is at West Point, where this same team intends it to stay another year. The Army team, coached by Lieut. Don Galloway, developed a strong attack early in the season, beating Cornell, Squadron A and the 112th Field Artillery teams by large scores. Against stiffer competition from Yale, Fort Hamilton, Penn Military College, and Princeton, it developed a remarkable staying power and a powerful defense based on Harry Wilson's strength at back. Rarely did Army lead at half time, but at the end they were always 3 goals or more in front.

As a result of these impressive victories Army entered the tournament in the unusual rôle of favorite. The first game, with Princeton, brought out the fact that the team could play the same coördinated, balanced polo in a small arena as it had been played all year in the large Riding Hall at home. Princeton never threatened after the first period—and the final score, 10½ to 2, was a good measure of the relative strength of the two teams. In the semi-finals the team met P. M. C., whose No. 2, Clarence Combs, is one of the best of the indoor players. In a

fiercely contested struggle, Wilson's outstanding play kept P. M. C. behind, and in the last period the Penn team went to pieces before Army's superior team play. Several goals by Cecil Combs and Estes definitely decided the issue at 9½ to 4.

It was expected that the Yale game would be tough, but no one anticipated the battle it turned out to be. Army's mounts, thanks to the work of Major Jack Thompson, proved equal to Yale's best, and the game soon developed into a riding and bumping contest. Yale's first goal came when a back shot by Combs, Army's No. 1, bounced off a horse into Army's goal—Yale pressed this advantage and at the half the score was 2½ to 1½. Neither team had been able to break loose, however—the hard riding-off of every player made any sort of open play impossible. In the third period Army broke through to score twice and tie the game—and for the rest of the game the tide rose and fell as first one team and then the other gained the lead. Both teams were playing fine polo at a terrific pace—Army seemed to have a slight advantage, but twenty seconds before the end of the game Yale scored to take the lead 6 to 5½—a few seconds later a back shot fell short in front of Yale's goal—and Howell Estes, the Army captain, drove it through—the last play of the game and Army's fine championship.

Military Horse Show at West Point

By Captain Frank DeK. Huyler, Cav. Res.

THE Annual Mid-Winter Military Horse Show, held in the Riding Hall at West Point on Sunday afternoon, January 27th, was by far the most successful mid-winter show in the history of the Academy. The custom of holding these exhibitions, at which many new fences, destined to be used at the annual spring horse show are tried out, was adopted two years ago. By watching the performances of the various competitors over the new courses, the members of the horse show committee are enabled to get an idea of the type fences best suited to be used in June, on the West Point course, which is rapidly becoming the most sporting in the country.

Despite almost zero weather, competitors and spectators drove for miles to attend the show. These, together with the personnel of the post, crowded the vast gallery to capacity.

Redwood, a big bay gelding, owned by the Essex Troop of the 102nd Cavalry, New Jersey National Guard, from Newark, N. J., and ridden by Sergeant Robert F. McGarry won the Individual Jumping championship of the show, giving two faultless performances in addition to making the fastest time on the jump-off, in which he exceeded the sterling efforts of the old veteran, *Geronimo*, ridden by Lieutenant J. W. Wofford, and those of a very capable young horse, *Lady Biff*, owned and ridden by Major John B. Thompson of the Tenth Cavalry. The latter had the fastest time on the jump-off but had 4 faults scored against her, giving second money to *Geronimo*, which, though making slower time, had no jumping faults.

Rivaling the Individual Championship in importance was the team event, open to three horses of each unit, to be shown singly, the total score of each team to count. The West Point team composed of Lieutenant A. A. Frierson on *Ken*, Lieutenant Samuel P. Walker on the famous *Geraldyn*, formerly of the International team, and Lieutenant Theodore Riggs on *Hickory*, won the event with ease, making a perfect score. The 61st Cavalry Division team, composed of Reserve Officers from New York, took second place. The team was made up of Lieutenant John W. Morris on *Suntan*, Lieutenant George M. Kaufmann on *High Test* and Captain C. C. Farrelly, riding *Lady Causeway*. The Essex Troop second team was third.

Mrs. John Thompson, wife of Major Thompson, was the star of the local jumping class, open only to the officers and ladies of the post. Riding *Cricket*, she triumphed over a large field of competitors. Lieutenant G. B. Conrad was second on *Pappy Weeks*, while Lieutenant Frederick Weber and Captain F. B. Butler were third and fourth, riding *Juliet* and *Dan Patch*, respectively.

A rather unusual thing occurred in the cadet jumping class, in which there were 22 entries. Nine horses came through the jump-off with clean performances over the

raised fences. The remarkable thing was that Cadets Clarkin on *Alsace* and Schweidel on *Juliet* were not only faultless but tied again at exactly 20.06 seconds. On the third jump-off, a rare occurrence under International scoring, Cadet Clarkin took the blue, with Cadet Schweidel second, and Cadet Mock, riding *Baker*, third. Fourth place was awarded to Cadet Ruhler on *McClellan*.

The children's horsemanship competition, open to children from 10-16 years of age, attracted a great deal of attention. Master Tommy McCunniff, young son of Major D. E. McCunniff, made an excellent exhibition to win the coveted blue ribbon, with Miss Sally Anderson second, Master Roger Alexander third, and Miss Margaret Felch, fourth.

The other event on the card was a polo pony scurry, open to members of the cadet polo team. Cadet Palmer won the class on *Bandy*, with *Norma*, ridden by Cadet Elroy, second.

The classes were judged by Mr. F. P. Warfield, of Port Chester, N. Y., Mrs. John B. Thompson, Captain R. E. S. Williamson, and Lieutenants L. E. Shick, W. A. Holbrook, D. H. Galloway, F. G. Fraser, H. M. Forde, and Egon R. Tausch, all of West Point. The rules of the *Fédération Equestre Internationale* applied in all jumping events.

ARMY HUNTS

The Cavalry School Hunt Fort Riley, Kansas

HUNT STAFF

Joint Masters. Lieutenant Colonel J. M. Wainwright, and Major F. Gilbreath.

Honorary Whippers-in. Captain E. M. Burnett, Major J. C. Daly, Lieutenant C. H. Noble, Major C. A. Pierce, Lieutenant E. F. Thomson, and Major I. T. Wyche.

Kennel Huntsmen. Sergeant A. J. Teasley, and Private Walter Brown.

Hounds. Our pack consists of eighteen and one-half (18½) couple of English and cross-bred English and American hounds. We are working toward a uniform pack of cross-bred hounds, this type having proved the most useful in this country, although the English hounds that we are now hunting are very satisfactory. We will not, however, breed any more pure-bred English hounds, but will continue development of the cross-bred hound, which now constitutes the bulk of our pack. It may be of interest to know that, with the exception of four hounds, every hound in our kennel is the product of our own breeding and raising.

Country. Although we hunt occasionally off the reservation to any distance we desire in the surrounding farm country, the majority of our hunting is done on the Fort Riley reservation, which comprises about 25,000 acres of land, including timbered river bottoms and rolling upland country broken by rough and wooded ravines. Obstacles consist of natural stream lines and ditches and panels in

the pasture fences on the reservation, the panels including all kinds and types of obstacles, stone walls, post and rail fences, plank fences, worm fences, and gates.

Game. The Cavalry School Hunt runs a drag twice a week and usually hunts coyote one day a week.

Interest. The hunt is enthusiastically participated in by Army personnel, including many ladies, and by a few civilians from nearby communities. The fields are sometimes as large as one hundred persons, and perhaps an average field of some forty to sixty will be found on Sunday mornings, smaller fields on other days. During the past season we have had no outstanding runs on coyotes, on account of the drought with which this country has been afflicted, although we have had one or two quite good runs. The drag runs are uniformly successful, unless the ground is terribly dry and dusty with a high wind blowing. With average conditions, the drag is successful and usually includes about ten or twelve miles of galloping.

Meets. Hounds meet on Wednesday and Saturday afternoons and on Sunday mornings.

The First Cavalry Division Hunt Fort Bliss, Texas

HUNT STAFF

Joint Masters. Captain John C. Macdonald, Cavalry, and First Lieutenant R. M. Shaw, 7th Cavalry.

Whipper-in. First Lieutenant W. H. S. Wright, Cavalry.

Kennel Huntsman. Pvt. 1cl. Paul E. Womer, Cavalry.

Secretary. Captain G. B. Hudson, Cavalry.

Size of Pack and Type of Hounds. Fifteen couples English hounds.

Length of season. October 1st to April 30th. Regular day: Sunday. Special day: Wednesday.

Extent and nature of country. United States Military reservation, Fort Bliss, Texas, and adjoining country (unlimited). Country very dry and sandy.

Game. Coyote and drag.

Amount of interest in the Hunt. Hunt supported by 85 officer members of Hunt Club. Until recently when all activities were taken over by Post Club. Under the latter plan all officers of the Club will support hunting. Civilians are interested and a number hunt by invitation.

Interesting item. In this dry country nose is the vital necessity. To gain this end I have crossed a well-bred English bitch with a well-bred blood hound-fox hound cross, owned by Mr. Joe Evans, Valentine, Texas, who successfully hunts mountain lions, coyotes and wild cats with a pack in the dry country of the Big Bend of Texas. From the cross I* raised six beautiful blood-fox-hound puppies. These hounds will be entered this fall. It is expected that their improved noses, by virtue of their

blood hound ability will aid in hunting this dry country. The experiment will be followed with interest.

The Field Artillery School Hunt Fort Sill, Oklahoma

HUNT STAFF

President, Colonel R. C. Foy; M.F.H., Lieutenant Colonel C. A. Baehr; Secretary and Treasurer, Major C. M. Lucas; Huntsman, Captain E. W. Searby; Honorary Whippers-in, Captain H. C. Demuth, Major C. M. Lucas, Major R. L. Coe, and Lieutenant R. L. Taylor.

The Artillery Hunt has twenty and a half couples of American, Walker, and English fox hounds. One pack of five couples is hunted on coyote; the other pack of thirteen and a half couples is used for drag hunting.

The length of our hunting season here extends from about the middle of October to the latter part of April. Due to the nature of the work at this post, our hunts are held on Sundays and Wednesdays, the game consisting principally of coyote and drag.

We have not tried to interest the civilians in the community near us, who would be eligible to become members, but have several on an honorary membership basis who hunt frequently, most of them on their own hunters.

However, due to the isolation of this post from any large centers of interest and places of amusement, the response of the garrison to this sport has been very satisfying, indeed, our membership consisting of a hundred and twenty members, or more, at all times.

The reservation consists of 51,300 acres. In addition we have made arrangements for hunting over many of the adjacent farms and have put in panels over a lot of wire.

The Infantry School Hunt Fort Benning, Georgia

OFFICIALS

Brigadier General G. H. Estes, Commandant

Colonel Charles W. Weeks, Assistant Commandant

Captain Sidney H. Negrotto, M.F.H.

Honorary Whippers-in. Major Wm. H. H. Morris, Jr., Captain Joseph A. Nichols, Captain Wilbur S. Elliott, Lieutenant Charles R. Landon, Lieutenant Joseph P. Cleland, Mrs. Virginia Stutesman, Mrs. Kay Studebaker, Mrs. Marie Dunn, and Mrs. Lewis O'Brien.

Junior Whippers-in. Miss Betty Negrotto, Miss Margie Heileman, Mr. Lawrence Persons, and Mr. Tommy Arms.

INFORMATION PERTAINING TO INFANTRY SCHOOL HUNT

Number of days per week? Two (2).

Season including cubbing—months inclusive? September 15-March 15.

*Captain McDonald.

Number of hounds in kennels? Live pack, 20 couples.
 Drag pack, 16 couples. Miscellaneous, 9 couples.

Number usually hunted in pack? Live pack, 16 to 18 couples. Drag, 14 couples.

Whether dog and bitch packs or mixed? Mixed pack.

Type of hound found most suitable? Walker.

Number of times out? Forty-one (41).

Number of blank days? One (1).

Number of hours usually out? Three to six hours.

Hours at which you go out (by months)? 5:00 A.M. to 6:00 A.M.

Average field? Eighty-eight (88). Largest field, 235 mounted. Smallest field, 52 mounted.

Condition of ground by months? Excellent throughout season.

Scent by months? Excellent except one day when temperature was down to 18 degrees.

Foxes—Proportion red. Eight put to earth. Proportion gray. Twelve killed, eight treed.

Coyotes? None.

Bob-cats? Four killed, one treed. Two lost.

Wild boar? Forty-four captured.

Has this proportion changed? Varies.

Are you troubled by shooting of foxes? No.

By trapping? No.

Does state pay bounty on—1 Red. 2 Gray. All hunting is done on military reservation, 97,000 acres.

Type of hunters found most suitable? A good, strong jumper with lots of endurance, sure-footed and quick.

Description of best run or runs of season. December 22, 1934. Light frost, cold, windy. Seven mile point. Hounds ran 23 miles. In saddle six hours. Covered thirty-five miles.

Case hounds at 5:45 A.M. on Amory Creek. Picked up cold line at 6:00 A.M., which hounds worked alternately fast and slow for about twenty minutes. Gray fox found on Savage Hill twenty minutes later. Hounds drove very hard at top pace for three hours when fox ran up a tree near headwaters at Harps Creek. While watching fox in tree to our astonishment fox dashed down the tree to the ground. Squalor, who was nearby was on his trail in a flash and soon the entire pack (18 couples) were in full cry. Strenuous efforts to take the pack off this gallant fox were of no avail and he was killed at 10:45. This was the most perfect pack work I ever witnessed.¹

Have you a poultry fund and how do you operate it? No.

Have you a fencing or panelling fund and how do you operate it? No.

Has there been much eye disease (periodic ophthalmia) in the horses in your locality? No.

Do you inoculate for distemper, if so, what system and what results? Yes.

¹I am convinced this grand old dog-fox enjoyed this chase as much as hounds and field.

The Fort Leavenworth Hunt Season 1934-1935

To

LIEUTENANT COLONEL EDGAR W. TAULBEE,
10th Cavalry

Master, Fort Leavenworth Hunt.

May the reading of this simple log in some way serve as a happy reminder of many happy hours spent with horse and hound during the past season.

THE STAFF.

*"When hounds are running and scent is breast high,
 He takes his own line which is straight as a die.
 Each fence he encounters he greets with a smile,
 And no one can touch him for dash or for style."*

"HOUNDS MEET AT 9:00 A.M., MERRITT LAKE."

The Fort Leavenworth started its eighth season last November. The opening hunt was held on November 11th, Armistice morn, with a field of sixty.

A very impressive and appropriate ceremony was held on this Armistice Day hunt. Hounds were checked at about 10:55 a.m., on the slopes of Sheridan Ridge in the vicinity of the Hunt Lodge. Sharply at 11:00 a.m., the clear stirring notes of a 10th Cavalry buglar brought rider and horse to attention to pay simple homage to a host of gallant riders who had attended their final meet and viewed their last halloa.

Had old Jorrock been stirring about, "in the coverts up yonder" on Armistice morn, well might he have pondered over his words, "untin, ** is the image of war without its guilt, and five and twenty per cent of its danger."

The hunt staff for the 1934-1935 season was as follows:
Joint Masters: Lieut. Col. E. W. Taulbee, Cavalry, and Major W. M. Grimes, Cavalry.

Honorary Whippers-In: Major P. B. Rodgers, Infantry, Captain W. A. Collier, Infantry, Lieut. P. C. Haines, Cavalry, and Lieut. A. M. Miller, Jr., Cavalry.

Hounds were actually hunted by Colonel Taulbee, assisted by the honorary whippers-in. No professional field staff was employed.

Hounds consist of twenty-three couple, mostly American, raised in this vicinity, largely a strain of the Walker family. A draft of four couple was received from the Green Spring Valley and Elkridge Hunts in Baltimore. These consist of two couples of English with two of half-bred hounds. Hounds are divided into two packs, known respectively as the "live" and "drag" packs.

During the winter a modern up-to-date kennel was established in the old Dee Bee dairy. It is believed that this kennel compares favorably with any of the army kennels, and many of those of the civilian hunts.

Every effort has been made this season to develop the possibilities of live hunting. A few hounds that had been trained to hunt coyote were purchased, and around these as a nucleus a live pack was started. This pack has been hunted two and three times a week, regardless of ice, snow and rain, and are capable of showing good sport. It has

been a long, hard task, an up-hill fight, starting from scratch, but the results have been very gratifying.

This pack can be nicely rated, cast into cover and assembled in a very workmanlike manner. As a result of the painstaking care and effort to develop a creditable live pack, since Christmas, there have been only three blank days, and these days were more unfavorable due to weather conditions.

Our drag pack, though still a bit green and not quite as well disciplined as the live pack, is eager and will carry one over just as nice a bit of country as one could want and at about as fast a clip as one would choose.

Our drags approximate as nearly as possible a live hunt. Instead of the drag line being laid straight from one field and fence to another, it rather follows the line that a live quarry would take.

To the great surprise of most people, there is ample game both on and near the reservation. More hunts have been spoiled in initially jumping two coyotes and dividing the pack at the start than any other way. Due to the unusual summer and the long drought, farmers state that coyotes have never been more plentiful in fifty years. So it is truly an ill wind that blows no good. Many a time a coyote has been jumped, viewed and gone away with the pack in full cry within ten minutes after we met and within a mile of the flagpole; sometimes the field has rather cast a doubting glance toward the Master, but never have we "bagged" a coyote.

While the Leavenworth reservation proper is quite limited, the adjoining country to the west, out Kickapoo and Salt Creek Valley way, is ideal with good going, plenty of cover and game. The farmers are very friendly and liberal. They have granted permission to hunt their lands and welcome our attempts to keep coyotes moving. To them we give our heartfelt thanks for allowing us to ride over their farm lands.

A very extensive panelling program was laid out last year; the work was done in a most systematic, methodical and painstaking manner. The proof thereof lies in the fact that hounds have carried a coyote from the eastern slopes of Sheridan Ridge, up top side, down the western slopes into Salt Creek Valley, or via Blue Cut and Government Hill and thence west with horse and rider following almost the identical line of coyote, so true has been our panelling—truthfully one can say it was panelled with an "eye to the country."

The Leavenworth Hunt is unique in that it is a typical cross section of our army hunts, due to the fact that here are assembled officers from all over the service. It is not uncommon to see in the field representatives from every army hunt. In our field there ride Ex-Masters of Riley, Sill and Benning. One day we counted eight ex-honorary whippers-in from Riley, Benning and Sill alone! So much for that.

There is some sort of a saying in the Navy to the effect that "like skipper like ship." Our new skipper is an

enthusiastic hunter, and its keenest supporter. It is something of an inspiration to see a general officer leading the field and taking them as they come. Example is a great thing in the service—the effect of General Brees's presence in the field has done much to rejuvenate the spirit of hunting—fields have increased tremendously.

It can be said without fear of contradiction that whatever success the Leavenworth Hunt has attained this year is due to the keen and energetic leadership of Little Joe Taulbee. It probably is not known to many in the field, but hardly a day has gone by that has not seen Joe at the kennels at sun up supervising and often actually cooking the rations himself. Then followed many hours in the saddle roading the hounds in order that we might enjoy sport. Few army hunts have been privileged to have had a master who has had the enthusiasm, energy and ripe experience of a Taulbee.

The good sport that a hunt shows represents lots of hard work on the part of the staff. But in our enthusiasm for the present let us not fail to give credit to those who rode before, those who gave us a lead to the sport we now enjoy. The Leavenworth Hunt was blessed with a keen *lot* to guide it during its early days. To mention just a few of the ex-Masters who did so much to establish hunting on a firm basis: Frank Richmond, Johnnie Daly, Skinny Wainwright, Dan Mallan, Butler Briscoe, Ellis Jones, Pearson Menoher.

There has been one group that has been with the hunt since the beginning, our loyal, efficient, hard-working, faithful kennel staff. Sergeant Smith, Privates Green, Alexander, and Lockett, and their assistants. How many of the field realize or appreciate that the foundation of good sport rests on efficient kennel management with all that it entails—exercise, care and handling, feeding, and the like? Who has not marvelled at Sergeant Smith's ability to "blow them in," even on the coldest of days—when to touch the horn to one's lips was misery itself, but to do that and bring forth music, well that was something akin to magic?

Like a good hound, Joe is blessed with a melodious voice, his ringing "gone a-w-a-y" will echo for many a moon against the wooded slopes of Sentinel Hill—his "gone a-w-a-y" is not unlike the sacred command "Charge!" certainly it reawakens thoughts of galloping hoofs, cry of hounds, and a fast burst—the thrill and surge of the charge! "Let 'em roll."

Hold hard, please! In addition to Mat Ridgeway, the fillies and the kiddies, who make up the greatest proportion of our field, day in and day out. Their batting average is highest of all. Rain, snow or shine, they are always on hand, r'aring to go.

The approach of spring rings down the curtain on the 1934-35 season of the Fort Leavenworth Hunt, but in the meantime the staff will begin preparations now for the opening fixture next fall, when "Hounds meet at 9:00 a.m., Merritt Lake."

PROFESSIONAL NOTES AND DISCUSSION

Map Enlargements

By Major Eustis L. Hubbard, Cavalry, Recently Unit Instructor, 308th Cavalry, Organized Reserves

FOR the benefit of brother unit instructors, particularly, who like the writer have frequent occasion to enlarge maps of all kinds to illustrate lectures and conferences, there is outlined below a simple adaptation of an old and oft tried method.

No claim for originality is made.

The method of enlarging by the comparison of rectangular coordinates is perhaps more accurate, but it is tedious, and many a unit instructor has shrunk from the task.

Of course, when a pantograph is available, it materially reduces the labor, but the pantograph requires a large horizontal surface on which to work, and at times neither the horizontal surface nor the pantograph may be available.

The method described is rapid, sufficiently accurate, can be used either on a horizontal surface or on a wall board, and, most important of all, the equipment is al-

ways readily available, consisting merely of an elastic band and a pencil.

The description follows:

Assuming that the paper for the map enlargement is thumb-tacked to a wall board, and that the original is to be enlarged five times. (This figure is selected for convenience only. Any ratio may be selected compatible with the relative sizes of the original map and the wall or table surface.)

See diagram herewith.

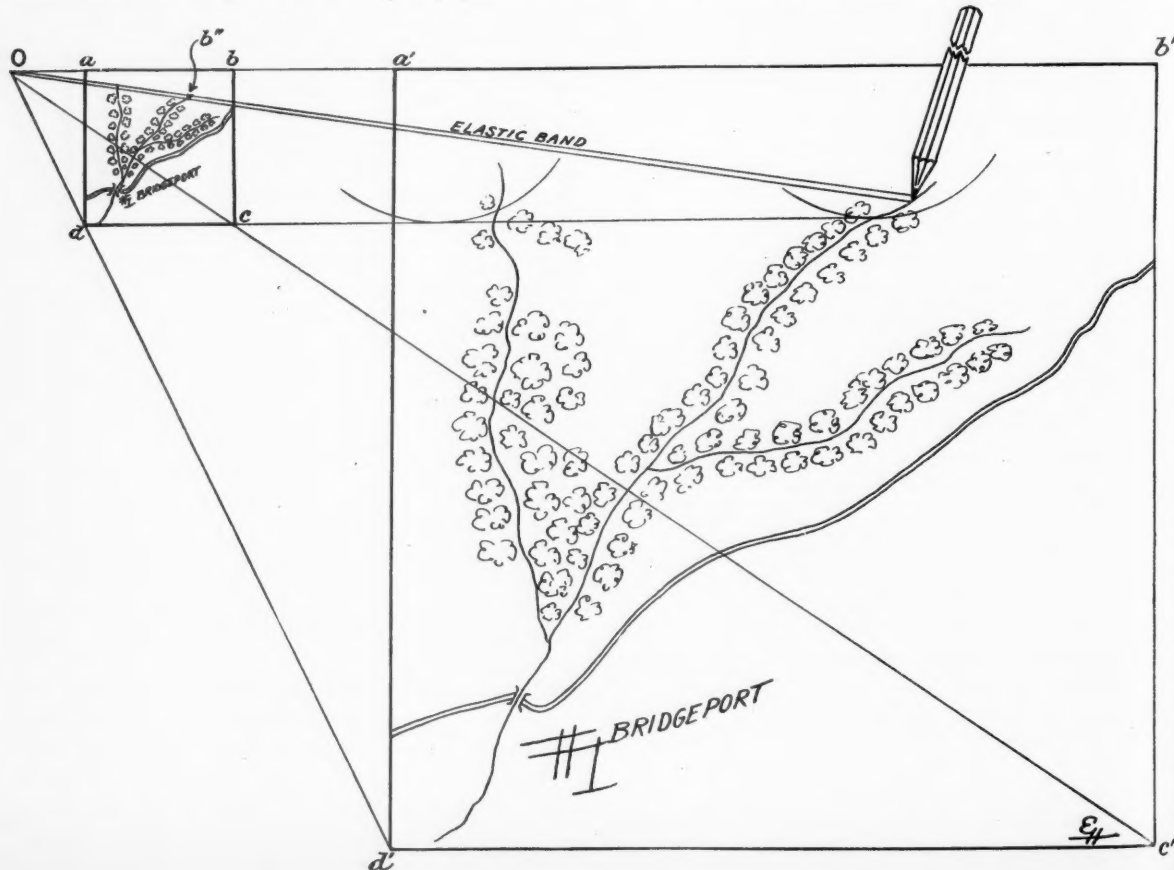
On the paper selected for the enlargement draw a rectangle whose sides are the required multiple of the sides of the original map.

Draw the line d-c tangent to the circle shown whose radii are equal to the side b-c of the original map. Place the original map as shown. The distances, o-a, and b-a' being varied as convenient.

Draw the line c'-c and prolong. The intersection with b'-a'-b-a, prolonged, is your point of origin.

Stretch an elastic band from o (the origin) to b' and make a knot or loop to hold the pencil point at b'.

Make a mark on the elastic at the point b. Let us call



this mark, b" (a piece of white thread makes a good mark for this purpose). It should be tied while the elastic is stretched to prevent slipping.

Now proceed as you would with a pantograph. Follow with the mark b", the line on the original you desire to reproduce. There is no need to watch the pencil. You simply hold it in your hand and keep your eye on the mark b".

As you trace in your streams, railroads, roads, etc., mark in your towns and name them as you go.

If you desire to show streams in blue, use a blue pencil. No need to trace them over.

A brown pencil for railroads, a green one for trees, etc.

One word of caution. Be sure that the elastic is stretched enough so that if you desire to show a point near a' on the enlargement, there will be enough pull to bring the mark, b", past, a, on the original.

This method may be used for maps of any size. One simply varies the length of the elastic used. A small one for a small map, a large one for a wall map.

The use of an elastic band for making enlargements is not of course original with the writer. It is hoped however that the above adaptation of an old and well known principle may save some brother unit instructor the labor incident to making his conference maps by the tiresome and cumbersome use of rectangular coordinates.

Windolph

Sturgis, South Dakota.

February 24, 1935.

EDITOR, CAVALRY JOURNAL
1624 H Street
Washington, D. C.

Sir:

My attention has been called to an article in the November-December, 1934, issue of the CAVALRY JOURNAL entitled "Windolph, Benteen and Custer," in which Mr. W. J. Ghent attacks a statement of Sergeant Charles W. Windolph, Company H, 7th Cavalry, to the effect that, on the morning of June 25, 1876, just before the start of the fatal march, he heard General Custer reply to Captain Benteen's suggestion that the regiment be kept together. "You have your orders. Sound to horse."

The statement was taken, I assume, from a collection of Survivors' Tales, which I gathered from a number of living Seventh Cavalrymen, Sioux and Cheyennes, a few of which stories were published some time ago.

Mr. Ghent very charitably attributes the statement to a tricky memory, a politely unpleasant way of avoiding the short and ugly word. I inveigled that story out of Mr. Windolph some years ago at a time when nobody had ever noted anything amiss with his memory. No one has ever questioned his veracity. Others tell me that he had mentioned the incident thirty years ago.

Mr. Ghent proceeds to "prove" the story false by a number of dogmatic denials and certain recitals which he

designates as "documentary evidence." One cannot, I assert, accept these denials as proof, unless Mr. Ghent was there. Perhaps he was. And I am a trifle perplexed at what he defines as "documentary evidence" and am wondering how he would go about it to get his documents admitted over the objection of irrelevancy and hearsay. After analyzing them carefully, the best one can make of them is that they merely *fail to prove* that the words were uttered. In no way do they prove that they were *not*. But perhaps I am ultra-technical. Let us take up the arguments.

Quoting: "The story is simply fantasy, without the slightest basis of fact." Well, I have already commented on that sort of proof. Skip it.

Again: "In the first place, no such incident could have remained so long in oblivion. If the story could possibly be true, where was it slumbering all the fifty-four years between the day of the battle and the time Windolph gave it to the press?" In this connection I may say that I have collected the stories of a dozen or so actual participants on both sides. None had ever been published before, and some not yet. Every one of them contains, at least, one incident I had never encountered elsewhere. And all, with one or two exceptions, are perfectly consistent with known and accepted facts, and I see no reason to doubt them. I had to resort to positive skullduggery to exact certain of these stories—one under a promise never to publish it (Mr. Van de Water should have had that). The dog stew I have eaten to get others. . . . No. It is not so remarkable that this story remained untold until it was told.

"How," Mr. Ghent asks, "could it have escaped mention during the more than twenty days of rigorous questioning of the Court of Inquiry?"

Now, *there is* something. How many Seventh Cavalrymen have marveled at the stuff that did not come out at that Court of Inquiry—wondering why they did not subpoena all of the 256 surviving victims of Custer's . . . ah, what shall we call it? That argument does not sound persuasive.

"It will be noted that Custer's alleged reply presents the General in the light of an arrogant and arbitrary commander, unwilling, even in the face of a critical situation, to listen to the counsel of a subordinate." Name of a name. Can anything Custer ever said or did, there or elsewhere, present him in any other light? That he was courteous and conciliatory to Benteen, I doubt not. Servility to a mental and moral superior, who certainly had his number.

The "specific refutation" Mr. Ghent attributes to Benteen does not appear in his article. Again, merely an absence of affirmance. I imagine there may have been a great deal that Benteen forgot to say about Custer.

In getting these stories I have taken a great deal of pains to test both memory and veracity. I have cross-examined, purposely asking false leading questions in

(Continued on page 80)

THE FOREIGN MILITARY PRESS

REVIEWED BY MAJOR ALEXANDER L. P. JOHNSON, INFANTRY

AUSTRIA — *Militärwissenschaftliche Mitteilungen* — December, 1934.

MOLTKE-CONRAD. By Lieutenant Colonel Dettmer.

The author offers an interesting comparison between the Chief of Staff of the German Armies in 1914, and his Austro-Hungarian colleague, General Conrad von Hoetzendorff. Both leaders began offensive operations and each ended in a retreat, the Germans to the Aisne, the Austro-Hungarians to the San. Here, according to the author, all similarity ends. While the Austrian Generalissimo ordered his withdrawal of September 11, practically at the eleventh hour to save his armies from the crushing Russian steamroller, General von Moltke, the author points out, retreated from the Marne, September 9, at the very moment when victory seemed within the grasp of the German armies, Paris in sight of the victorious right, the French center pierced, and the situation on the German Left quite satisfactory. These basically different situations prompt the author to ask, what would have happened on the Western Front had the aggressive, tenacious Conrad been at the head of the German Armies in 1914 instead of the weak and vacillating von Moltke? The author is convinced that the German retreat from the Marne to the Aisne would not have occurred.

The author briefly summarizes the progress of the war during the early weeks. On the Eastern Front, the Austrians as well as the Russians launched an offensive, each seeking to envelop the other's left flank. The Austro-Hungarian First Army defeated the Russians at Krasnik but failed to reach Lublin. Fighting stubbornly, this army soon found itself in a critical situation. The Fourth Army likewise defeated the Russians near Zamosc-Komarov. The Third Army on the south, however, having a defensive mission, was overwhelmed by the Russians, and after days of hard fighting it was forced to withdraw. The defeat of the Third Army exposed the Fourth and First Armies to the danger of being rolled up. The author believes that had Moltke been in command of the Austro-Hungarian forces, he would have done just what he did on the Western Front: order a general retirement at this juncture. Not so Conrad. The Austro-Hungarian Chief of Staff still stuck to his guns and planned a renewal of the attack. He reconstituted his armies, boldly wheeled around the Fourth Army to its new attack position, and struck at the Russians once more. The ingenuity and boldness of this maneuver has been acknowledged by military experts. It was General Conrad's own plan, and the German High Command had no part in its conception or execution.

The author also points to the fact that General Conrad established his C.P. at Przemysl, close to the front,

whence he could effectively control and influence the operations, unlike German G.H.Q. in Luxembourg, far from the theater of operations. Conrad was a man of great ability, the author writes; Austria-Hungary's outstanding general, and in spite of his ultimate failure, the foremost military leader of the World War.

BELGIUM — *Bulletin des Sciences Militaires* —

THE PRESENT STATE OF THE SOVIET ARMY

Voroshiloff, Soviet Peoples' Commissar for War, in a recent speech, reported in the February 4 issue of *Krasnaya Svyetda* (Red Star), official organ of the Red Army, outlined the present state of the Soviet military establishment. Accordingly, tanks are available in ample numbers and of latest type. The artillery is noted both for quantity and quality of its matériel. Soviet Russia now actually produces huge quantities of automatic weapons. The chemical industry is powerful but still inadequate. Signal matériel is being developed, but results obtained so far are not yet satisfactory. Bombardment aviation is well developed. Facilities exist for the production of airplane motors. Laboratories for scientific research have been set up. Fortifications along the frontiers and the coast lines have been completed and will present serious obstacles to whomsoever may venture to cross into Soviet territory. The navy is now being strengthened. Great progress has been made in marksmanship training, and it is the constant endeavor of Soviet Army authorities to improve methods of instruction as well as matériel.

The social composition of the Red Army is indicated by the following figures:

1930: workers 31.2%; peasants 57.9%; employees 10.9%
1934: workers 45.3%; peasants 42.5%; employees 11.7%

Voroshiloff also noted that railway transportation still is far from what it ought to be, and that condition constitutes a serious impediment to all phases of economic life. He attributes this condition to a lack of discipline and a tendency to haggle over orders.

FRANCE — *La Revue Militaire Francaise* — May and June, 1934.

STATISTICAL DATA CONCERNING THE ARMED FORCES OF FRANCE, 1914-1918. By Lieutenant Colonel Larcher.

The author presents an interesting statistical survey of the French military forces engaged during the World War. According to these figures, France had with the colors on the eve of the war 835,000 men, and 112,000 colonial troops. The author observes this total represents the maximum strength ever attained by the French Army in time of peace, and it was made possible by the intro-

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duction of the three years active service standardized in 1913. In the course of the war France mobilized a total of 7,842,000 men. The author states that while Germany had completely exhausted her man-power, France did not commit to action her class of 1919, nor did she call to the colors the contingent of 1920.

At the outbreak of the war France had 211,000 men on duty overseas, leaving a covering force of 736,000 behind which the man-power of France mobilized and prepared to take the field. At first about 64 per cent of the drafted personnel was allotted to combatant arms. By the end of 1917 the ratio was approximately as follows: combatants 51 per cent; units and services of the interior 23 per cent, and public services and works 26 per cent.

The author supplies interesting data concerning the organization of major tactical commands. In 1914 the idea of Groups of Armies was quite new and indefinite. The Group of Armies of the Northeast came into being during the mobilization. It comprised the entire theater of war and hence was generally confused with French G.H.Q. As the operations gradually extended to the sea, the organization of the Group of Armies of the North became a necessity. The Groups of Armies of the East and the Center came into being in January and June, 1915, respectively. War experience thoroughly established the value of these high commands.

In 1914 France took the field with five armies. The following year their number had increased to nine. Each army operated within a natural well-defined geographic area. Army Corps increased from an initial 20 to 35 in 1915. There were two types of corps. Those within defensive sectors consisted of two divisions, while corps earmarked for offensive operations had four divisions. The battle of Verdun changed this set-up. Thenceforth the corps became essentially a tactical command consisting of a variable number of divisions from two to six. The author observes that the operations of 1918 clearly demonstrated the desirability of maintaining corps intact with divisions assigned permanently.

In 1914 France had 47 infantry divisions. By the end of 1915 their number had increased to 96 regular and 13 colonial divisions. By reducing the number of battalions in each division from twelve to nine, the number of divisions was increased in 1916 to 112, while at the same time the number of colonial divisions decreased to six. In 1917 the strength of the French division was reduced once more to a total of 12,000 men, permitting an increase in the number of divisions to 114; but the shortage in replacement decreased that number to 112 by the time of the Armistice.

As to the battle record of French divisions, the author shows that while records credit only 26 divisions with the defense of Verdun, there were actually 66 divisions engaged in that sector in course of the war, some of them in fact on two or more occasions. The battle record of 102 divisions for 1918 shows that each division participated on an average in four major engagements during that year, while for the entire war 57 divisions actually participated

in ten or more engagements, three of them in as many as sixteen.

French casualties amounted to 4,015,000. Casualties among officers amounted to 18.9 per cent, among enlisted men 16.1 per cent. The infantry bore the brunt of the battle with a casualty list of 29 per cent for officers and 22.9 per cent for enlisted ranks. The corresponding percentages for the cavalry and artillery were 10.3 and 7.6 per cent, and 9.2 and 6 per cent respectively.

—*La Revue d'Infanterie*—September, 1934.

TRAINING OF INFANTRY CADRES. By Lieutenant Colonel Guigues.

The author discusses the problem presented by the necessity of training rapidly and effectively the annual contingent of recruits, and the need of providing qualified, efficient instructors to carry on the work. The training of instructors provides the specific subject of this installment of the study. Preparation is important. Its object is, or ought to be: (1) thorough study and discussion of pertinent regulations, (2) fixation of basic doctrine, and (3) organization of actual training. The author describes a method of procedure which is thoroughly practical and meticulously methodical. It should produce capable instructors, and should assure uniformity of training and indoctrination. Theoretical instruction is followed by practical application. The author deplores slipshod methods in the conduct of tactical exercises. The injection into problems of artificial incidents which are inconsistent or incompatible with the general situation, he states, will create confusion, hence must be avoided. Directors of training must exercise the greatest care in planning the work, notably in fixing the exact limits of the subject matter to be taught.

GERMANY—*Militär Wochenblatt*—June 4, 1934.

OLD FORMALITIES. By No. 296.

The unnamed author voices his strong objection to the quaint old forms of speech used by polite society in Germany when addressing a lady or gentleman of breeding. He objects to those forms, which have no equivalent either in French or English, on the ground that they are obsolete and "contrary to the spirit of New Germany." To the average American the time-honored terms "wohlgeboren" (well-born) and "hochwohlgeboren" (high-well-born) seem rather meaningless and grotesque; and he will readily agree with the author's views. Similarly, there may be a good deal of sympathetic understanding for the author's aversion to the boring formality of routine visits of courtesy which form part and parcel of the social life of every garrison the world over, in fact of well-bred society everywhere.

Significant as the author's views might be because of their bold opposition to age-old customs, even greater significance attaches to his third "peeve" voiced against the custom of mounted orderlies riding behind their officers as if to emphasize publicly the social gulf that sepa-

rates the enlisted man from the officer. In the author's opinion, officer and his orderly should ride side by side. This will not only encourage "chummy" conversation between the twain, but it will be conducive to the horses travelling more quietly.

The views expressed by the author are significant because of their strong resemblance to those in vogue in Bolshevik Russia in the heyday of the revolution. It is even more significant that a military publication of the importance and prestige of the *Militär Wochenblatt* should find space for their publication. It would be interesting to know to what extent these radical tendencies prevail among officers of the Reichswehr. At any rate, three officers voice dissenting opinions in the issue of June 25.

—September 18, 1934.

NATIONALITIES OF THE SOVIET UNION AND THE RED ARMY. By Dr. Bruno Manrach.

Conscious of the powerful influence the army might exercise in the process of unification of the heterogeneous racial groups which make up the population of Russia, the Soviet authorities seriously endeavor to bring each citizen of the Union at least for a short space of time under the Army's influence. In this respect the Soviet policy differs sharply from the practice of the former Imperial Government which exempted from military service non-Russian elements in both European and Asiatic Russia. In keeping with the fundamental idea of the Soviet system, which is based upon class-rule rather than nationalism, the object of unification is not Russification of the non-Russian elements, but rather the integration of the entire population on a proletarian plane of class-solidarity. It is natural, therefore, that instead of disseminating and absorbing the "alien" elements in military units overwhelmingly "Russian" in nationality and speech, the Soviet authorities provide separate regiments for each racial group. In doing so, they take into full account racial peculiarities, aptitudes and qualities in the best interest of military efficiency. Thus racial groups are assigned to one arm or another in accordance with these special aptitudes. The Khirgiz, Turcoman and other Caucasian tribes, natural horsemen, supply personnel for cavalry organizations. Alpine regiments are recruited in the mountainous districts of the Soviet Union.

The project of organizing regiments along racial lines presents some serious difficulties. Several of the racial groups are on a low level of culture, and consequently there is a dearth of suitable "leader" material to fill what corresponds in the bolshevik nomenclature to commissioned and noncommissioned officers. The primitive state of some of the languages likewise presented serious difficulties by way of imparting military instruction along with a sound indoctrination along Marxian lines of political economy and social philosophy which are beyond the ken and mental horizon of some of these primitive wards of the masters of the Soviet Union, and whose

languages are adapted only to the articulation of the most rudimentary needs of primitive existence.

The problem of subsistence likewise provides complex difficulties among various religious groups where religious doctrines or racial traditions proscribed certain staple articles of food. Although opposed to all religion *per se*, even the Soviet authorities found it convenient to cater to religious practices and prejudices where the doing so is patently in the interests of the established regime.

Although regiments recruited exclusively among Lettish nationals and the Chinese gave a good account of themselves during the civil wars of the counter-revolution, the author observes, we must remember that they were stimulated by a deep-seated hatred of their former oppressors who represented the White cause. In conclusion the author notes that while the Soviet regime does not oppress the national minorities, there is, nevertheless, a definite feeling among all classes of an abject dependency upon governmental tutelage. The peasantry, which constitutes about eighty per cent of the total population, supplies a large proportion of the Red Army personnel. This class, as is well known, is not particularly devoted to the Soviet regime. In the author's opinion, the moral worth of the Red Army is rather dubious. It is probably for this reason that the Soviet authorities maintain within the Red Army a body of special troops of about 70,000 men as the Prætorian Guard of the Soviet Union which, according to the author, is particularly well-trained and equipped.

—Luftwehr—November 1, 1934.

ACTIVE A.A. DEFENSE. By Captain Dr. Hans Brehm, Retired.

The first blow of an aggressive belligerent with a powerful air force, the author writes, will of necessity be directed against the enemy's air bases, air ports, flying fields, hangars, airplanes and installations which are essential to hostile offensive action. It follows that A.A. defense will have to function effectively from the very start of hostilities, in fact one's own offensive action is in a large measure dependent upon the efficiency and alertness of the A.A. defense system. The first objective of every belligerent will be the attainment of air superiority, as this alone will assure freedom of action to ground troops and force the enemy on a defensive. This situation, in the author's opinion, demands the establishment and maintenance of an effective constantly alert system of A.A. defense organized at great depth to support the offensive action of the Air Force even though the latter be numerically inferior to that of the enemy. Even a small and weak air force, the author believes, must endeavor to strike an early blow. In fact there is a compelling necessity for such action for the moral and material effect of the success of such an early blow. This assumption leads the author to a consideration of the question whether the A.A. ground defense could inflict sufficient injury upon a numerically superior enemy to bring about an equalization of relative air strength, and to maintain that bal-

ance until one's own air force can be expanded sufficiently to assume the initiative. It is in effect the problem which confronts Germany today.

In the author's opinion, the organization of the A.A. ground defense with great density both laterally and in depth will prevent hostile aircraft from avoiding these defenses by flying around them. Neither will flying at high altitudes help much with vertical effective ranges of modern A.A. artillery in excess of 21,000 feet. Moreover, the author believes, flying at high altitudes severely taxes the flyers, hence it is an undesirable recourse in the execution of air raids. The author concludes, therefore, that the neutralization of the hostile A.A. defense is a prerequisite to a successful air offensive else it will prove a very costly adventure. In his opinion, the necessity of an effectively organized A.A. defense is obvious. It includes an efficient network of air intelligence and communications, as well as pursuit aviation organized and ready for instantaneous action. The least avoidable delay in getting the ground defenses or pursuit aviation into action may prove fatal. The author points to the fact that American pursuit aviation required on an average 3 minutes to take off after receipt of the alarm. It will take 17 minutes more or less for pursuit aviation to climb to an attack altitude. During these 20 minutes the invader flying at 300 km.p.h. can actually cover 100 kilometers, and he will, therefore, be able to carry out his attack mission against any installation within that zone.

The author offers some very interesting estimates regarding personnel and matériel which, in his opinion will be necessary for an effectively organized system of A.A. defense. The organization of an area comprising the radius of action of a bomber, assured at 500 km., would require 1,850 signal stations manned by 30,000 men. This would provide signal stations at 10 km. intervals to a depth of 100 km., and at 15 km. intervals to a depth of 400 km. more. A similar density of A.A. artillery with two pieces for each position would represent 3,700 A.A. guns exclusive of machine guns. The operation of these guns and fire-control equipment would require a force of approximately 110,000 officers and men. The total garrison of the 500 km. defensive zone would run up to 150,000 officers and men. Such a defensive organization, in the author's opinion, would compel a hostile bombing expedition to run the gauntlet of the fire of 37 batteries coming and going. Assuming a probability of two per cent hits which, the author states, is fully justified with modern A.A. equipment, this would be equivalent to annihilation.

GREAT BRITAIN—*Journal of the Royal United Service Institution*—November, 1934.

A DEFENSE OF CLOSE ORDER DRILL. By Major M. K. Wardle, D.S.O., M.C.

The author replies to an article by "A Field Officer" on "Modern Infantry Discipline," published in the August number of the *Journal*, taking issue with several

ideas advanced. Thus, he regards as fallacious the argument that "the best way of making a soldier the sort of a man who will excel in fighting singly or in pairs, is to give him no close order drill, but simply train him in the actual work that he will be called upon to do in battle." This, in the opinion of the author, presumes that the soldier trained both in close order drill and in open field work will cling to the one and fail in the other. He believes that the dispersion imposed by modern weapons, and the consequent lessened supervision, demand cohesion and team work far more than ever before, and it is "necessary to grind the spirit of unity in common effort into the very heart of the man."

In the author's opinion the object of good close-order drill is "to train men to place themselves in an attitude of the greatest physical and mental alertness, at the unlimited disposal of their commander, and by the skill and solidarity with which they execute his commands, develop a feeling of corporate endeavor and fellowship with their commander in the united effort to produce . . . a form of disciplined self-expression: a military work of art" in which all take equal pride. Close order drill, the author states, will produce more directly and more rapidly than any other means the pride in cohesion. Men of martial races know this instinctively, the author writes, and they love close order drill, "the thrill of corporate effort that is at the heart of all good soldiering."

The author takes issue with the attractive idea of the alleged superiority of the free-minded amateur over the hidebound trained soldier. Facts and reason, he states, are against it. On occasion "undrilled" troops indeed triumphed over "drilled" troops because of superior leadership, but the overwhelming experience is the other way around. Moreover, experience shows that the well-trained, well-disciplined pre-war regulars of all armies recovered from casualties, and were fit for action after a much shorter period than the purely "war-trained" replacements.

SPAIN—*Memorial de Infanteria*—June, 1934.

General Military Information.

Germany: The army adopted a new type light Minenwerfer of great precision and mobility. It weighs 375 kilograms, fires a 75-mm. projectile weighing approximately 12 lbs. with an initial velocity of 170 to 220 m/sec. It has a maximum range of 3,500 meters.

Japan: The Japanese inventor, Hositaro Shimizu, recently obtained a patent for a new model machine gun which, according to all reports, is more formidable and deadly than any other weapon of war. Tests conducted by Generals Tsigari and Hanagawa produced splendid results. In lieu of gunpowder the weapon employs centrifugal force as the propelling charge, hence it operates silently, firing at a rate of 1,200 rounds per minute. The gun weighs about 80 lbs. The initial velocity and penetrating power of the ammunition of this gun is said to be four times greater than that of the gunpowder-propelled ammunition.

ORGANIZATION ACTIVITIES

Second Cavalry Fort Riley, Kansas

THE regiment has been engaged in intensive training for the annual spring maneuvers of the Cavalry School. The mild winter has permitted an unusual amount of outdoors exercises. Squadrons have had the advantage of working with attached aviation, artillery, scout cars, and heavy machine guns.

A regimental horse show has been scheduled for March 15th in the West Riding Hall. It will include jumping classes for Pack Horses, N.C.O's, privates and children. The feature event is an open class of six entries from the 2d Cavalry, 13th Cavalry, and 1st Bn., 14th F.A. Two squadron shows for each squadron are being held in the regimental riding hall in preparation for this show.

The regiment and 1st Bn. 14th F.A., have constructed an indoor gallery range in the Sub Post Exchange basement. Intra and inter-regimental matches have been fired.

An exhibition drill under the direction of Lieutenant E. F. Thomson was staged at the Cavalry School horse show on February 15th. Four men from each troop comprised the drill squad.

Troop A, Captain Henry L. Kinnison, Jr., commanding, won the semi-annual troop administrative competition and was awarded an engraved plaque. Troop E, Captain W. C. Scott, commanding, won the annual inter-troop rifle gallery competition. Troop A won the annual inter-troop pistol competition.

The regiment is exceptionally proud of the achievements of its representatives in the graduation events of the N.C.O. Class of the Cavalry School. In the jumping phase of the Remount Competition, Sergeant Null, Troop E, was first on *Kind Lou*, Corporal Minthorn, Troop B, was second on *Reno Falleta*, and Corporal Stickel, Troop A, was third on *Ysleta*. Sergeant Childers, Machine Gun Troop, won the gymkhana cup by placing first in three of the five events. Sergeant Childers and Sergeant Null were selected to attend the Special Advanced Equitation Class for noncommissioned officers.

Third Cavalry (Less 1st Squadron) Fort Myer, Virginia

THE last of the Exhibition Drills presented by the troops at Fort Myer was given in honor of the Diplomatic Corps stationed in Washington on March 8, 1935. This Drill was attended by many of the Ambassadors and Ministers accredited to this country, and the Military and Naval Attachés who were present were greatly interested in the various phases of the Exhibition.

The 1935 Exhibition Drills proved the most successful yet presented at Fort Myer, and the request for seats from the general public exhausted all available seats three weeks in advance of the Drills.

Colonel Kenyon Joyce, 3d Cavalry, Commanding Officer at Fort Myer, inaugurated a series of Indoor Horse Shows, the first of which was held in the Riding Hall at Fort Myer, Virginia, on Tuesday evening, February 26th, and it proved a very popular addition to Horse Show activities in Washington and vicinity. The response of the public to the series of Indoor Horse Shows was that the second Show held on Tuesday evening, March 26th, was completely oversold and hundreds of people turned away because of lack of seating capacity in the new Riding Hall. The third and last of the series will be held on Tuesday evening, April 23d.

Major John F. Davis, 3d Cavalry, was relieved of command of the 2d Squadron, 3d Cavalry, on January 25th, to assume his new duties as instructor of the Guatemalan Army in Guatemala, and Lieutenant Colonel George S. Patton, Jr., 3d Cavalry, assumed command of the squadron until arrival of Major Arthur P. Thayer, on February 28th.

Colonel Patton will leave Fort Myer on April 15th for his new duties on the General Staff, Headquarters Hawaiian Department, to which station he will sail on his own sailboat, *The Arcturus*, leaving San Pedro, California, about May 10, 1935.

Captain Thomas W. Ligon, Adjutant, 2d Squadron, has been relieved from duty at Fort Myer and ordered to temporary duty with CCC activities as sub-district commander with station at Pittsburgh, Pennsylvania. Lieutenant Willard G. Wyman has been assigned as Squadron Adjutant replacing Captain Ligon.

Captain James T. Menzie was relieved of his duties as Post and Regimental Adjutant on April 1st, when he accepted a detail in The Adjutant General's Office, War Department, Washington, D. C. Captain Menzie has been relieved by Captain Alexander B. MacNabb from the Cavalry School, Fort Riley, Kansas.

Lieutenant George Mather is in Walter Reed Hospital with a broken collar bone, the result of an accident in the Riding Hall during an officers' equitation class.

Troop E, commanded by Captain James T. Duke, and Headquarters Troop, commanded by Captain Marion Carson, are on the target range, Camp Simms, D. C., for the annual target season. When they have completed their record practice both troops will return to Fort Myer, and Troop F, commanded by Captain Frank A. Allen, Jr., will go to Camp Simms.

Major General Robert E. Callan, commanding general of the Third Corps Area, will make his Annual Inspe-

tion of the Fort Myer command on April 18th and 19th.

The 2d Squadron, 3d Cavalry, and Machine Gun Troop, 3d Cavalry, under command of Major Arthur P. Thayer, will participate in the celebration of the anniversary of the Battle of Chancellorsville, Virginia, on May 2d and 3d, when it will represent the Confederate Cavalry in its screening operations before the Battle. In addition, the Squadron will present several Drills and Rodeo exhibitions during the course of the celebration.

Lieutenant Clayton J. Mansfield has rejoined the regiment after three months' temporary duty with the Olympic Pentathlon Squad at the United States Military Academy, West Point, New York.

Fifth Cavalry Fort Clark, Texas

POLO AT FORT CLARK

The 5th Cavalry is hard at work on polo in preparation for the coming spring polo tournament held by the 1st Cavalry Division at Fort Bliss.

Along these lines, a lot of new ponies are being brought along, under the tutelage of Captain Burgess, polo manager, to supplement our string, which we believe is second to none in the Cavalry Division.

We hope to defend, successfully, the 1st Cavalry Division Polo Championship won by us last November at the annual fall horse show and polo tournament sponsored by the 1st Cavalry Division Horse Show and Polo Association.

Last fall there were five teams entered in the senior tournament. The first game between Division Special Troops and New Mexico Military Institute, was won by N.M.M.I., 8 to 7. The second game, between the 5th Cavalry and the 7th Cavalry, was won in an extra period by the 5th Cavalry, 11 to 10; in the third game the 5th Cavalry defeated the 8th Cavalry, 8 to 7. The final game between the New Mexico Military Institute and the 5th Cavalry was taken by the 5th Cavalry, 8 to 5. The 5th Cavalry lined up with Captain Ireland at one, Lieutenant Ruffner at two, Captain Burgess at three, and Lieutenant Thornburg at back.

Next year it is expected that the entries for this tournament will include The Mexican Cavalry Team from Zaragosa, Mexico; this team won the junior championship this year.

We expect to take also a strong junior team to reclaim the title won by us a year ago this spring but lost this fall.

With the two fields we have here and our present string of ponies, we think our chances of being again successful are good.

Sixth Cavalry Fort Oglethorpe, Georgia

THE Sixth Cavalry during the preceding two months has been actively preparing for field service. In addition to squadron and troop problems, the regimental

commander utilizes one day per week for regimental problems, which are normally conducted in Chickamauga National Park adjoining Fort Oglethorpe. The participation of the 3rd Battalion, 22nd Infantry, in tactical problems has made it possible to have an actual, rather than an outlined or imaginary, hostile force.

Sports have received their share of attention during the winter season. The basketball league consisted of ten teams with Troop B, 6th Cavalry, finally winning the championship in a play off. With new alleys, bowling has created intense rivalry, and the winners are yet to be determined. Handsome organization and individual trophies have been procured for both sports. In polo, attention has been directed during the winter season to the development of new players and training of new horses. Active practice and play has been prevented by adverse field conditions but will be started about April 1st. It is planned to have three playing teams from the regiment during the coming season.

Colonel Walter S. Grant is expected to depart from Fort Oglethorpe on March 27th for his new assignment as Assistant Commandant, The Army War College. While the entire personnel of the regiment, the post and people of the community sincerely regret the departure of Colonel Grant and his family, all look with pleasure on the recognition accorded him in the new assignment. Lieutenant Colonel Kinzie B. Edmunds, upon the departure of Colonel Grant, will assume command of the regiment and the post until the arrival of Colonel Llewelyn W. Oliver in June. Orders have also been received for the following officers to date:

Captain Thomas W. Herren to Fort Leavenworth as student, Command and General Staff School.

Captain George R. McElroy, to duty with 63rd Cavalry Division with station in Chattanooga, Tennessee.

First Lieutenant Harry W. Johnson, to Fort Riley, as student in Advanced Equitation Class.

Second Lieutenants William E. Chandler, Harry W. Candler, and Bogardus S. Cairns, all to Fort Riley as students Troop Officers Class.

Captains Garnett H. Wilson and John M. Bethel have recently joined the regiment, while orders have been received assigning Major Melvin S. Williamson and Captain Maurice Rose to the regiment.

2nd Squadron, 12th Cavalry Fort Ringgold, Texas

WINNERS of the monthly horse show held in January were as follows:

Class I, Recruits,	Private Morris, Troop F.
Class II, Privates,	Private Cole, Troop F.
Class III, N.C.O's,	Corporal Beckwith, Troop E.
Class IV, Open,	Sergeant Smith, Troop E.
Class V, Open Novelty,	Sergeant Smith, Troop E.

Winners of the February horse show were for the same classes: Private Boone, Troop E; Private Hutson,

Troop E; Corporal Nagle, Troop F; Sergeant Smith, Troop E; Sergeant Smith, Troop E.

On January 27th a team of ten men competed in a rifle shoot at Fort McIntosh, taking fourth place.

The post basketball series was won by Troop F.

From February 23rd to 26th the band, basketball team and track team from Fort Brown and the basketball team from Fort McIntosh visited the post. During this period a basketball tournament was held, with the following results:

FIRST SERIES

Fort Brown	36	Fort Ringgold	34
Fort McIntosh	31	Fort Brown	28
Fort Ringgold	32	Fort McIntosh	30

SECOND SERIES

Fort McIntosh	32	Fort Brown	8
Fort McIntosh	9	Fort Ringgold	8

At the end of the first series each team had lost one game, and to decide the winner a second series was played. In this series Fort McIntosh won over Fort Brown, and Fort Ringgold drawing the "by" played Fort McIntosh and lost. It was excellent basketball throughout, clean and sportsmanlike. The trophy, an oak plaque with bronze figure and plates was presented to the winning team from Fort McIntosh.

The band, 12th Cavalry, gave several concerts during their stay here and played for the horse show, field meet and formal guard mount.

On the night of February 23rd an enlisted men's dance was held, officially opening the new Service Club. An officers' dance was held on the night of February 25th. The 12th Cavalry orchestra from Fort Brown furnished excellent music on both occasions. Many civilians from Rio Grande were invited to attend the dances.

The field meet held on February 25th, in a dust storm, was won by Fort Brown.

Major Sherman R. Ingram, V.C., was granted a leave of absence on February 15th, pending his retirement as Lieutenant Colonel on March 31st.

First Lieutenant Joseph W. Huntress, Jr., Q.M.C., joined from a three-months' leave on February 28th and assumed his duties as Post Quartermaster, relieving First Lieutenant Samuel L. Myers, 12th Cavalry, who has been Acting Post Quartermaster since July 1, 1934.

1st Squadron, 103rd Cavalry, P.N.G. Philadelphia, Pa.

COLONEL Arthur C. Colahan, commanding the 103rd Cavalry, was honored by the officers and men of the First Squadron when they tendered him a review on Thursday evening, December 20, 1934, at their Armory in Philadelphia.

During the ceremonies Colonel Colahan presented to Private first class Spencer W. Rawlins of Troop C a gold medal for being the high service man in the Wimbledon Match for 1934 and a President's Hundred Brassard for the same year. The inspection of personnel and equip-

ment put the Squadron on the alert for the Federal Armory Inspection to be held the next month. Major Edward Hoopes, the Squadron Commander, presided at the dinner and informal conference which preceded the review.

Results of the Major Schwartz Match

THE standing in the caliber .22 rifle match, held on the Armory 50-foot range during February and March, 1935, for the Major George A. Schwartz Trophy was as follows:

1. Troop C; score, 2,467.
2. Troop B; score, 2,466.
3. Troop A; score, 2,327.

The team of Troop C, which was declared the winner of the Trophy for 1935, was composed of: Sergeant J. M. Williams, Corporal J. G. Grigalumas, Private S. W. Rawlins, Sergeant J. C. Laws, Sergeant E. J. Lafferty, 1st Sergeant H. N. Sailer, Private T. J. Green, Private W. J. Hunter, Corporal W. A. Taylor, Private F. J. Wilson.

Sergeant J. M. Williams, Troop C, is the individual small bore champion of this squadron for 1935, and Corporal J. G. Grigalumas, Troop C, is awarded the second place cup.

(From Orders No. 2; Major Edward Hoopes, Commanding, 1st Lieutenant Ralph V. H. Wood, Adjutant.)

61st Cavalry Division New York, N. Y.

JUST a year ago, the Division formed the 61st Cavalry Division Association, one of the prime motives of which was to further the interest in the horse and other kindred things of such prime importance to the cavalry officer.

Under the leadership of the Association, a horse show team was formed, which competed with great success at the New York Spring Horse Show, Atlantic City, West Point, Fairfield, Westchester Country Club, Staten Island, and the great National Horse Show in Madison Square Garden, 40 ribbons were won by horses of the Division, 22 of them being blue. When the team first started active showing early last spring, it had but four active riders. At the present writing, no less than 30 officers are competing for places on the 1935 team. At present, it appears as though the New York Spring Horse Show will be the first exhibition in which the 1935 team will participate. It is expected that the Newark Horse Show, the annual exhibition of the 102nd Cavalry, New Jersey National Guard, will also find the 61st Cavalry Division well represented.

The pistol team, also sponsored by the Association, has been increasingly active during the past few months. Practice has been a weekly feature through the courtesy of Squadron "A," N.Y.N.G., which has most generously offered the use of its range, as it also does the use of its spacious riding hall and horses for the weekly riding classes. Through the kindness of the squadron, the horse

show team was also permitted to train there on two instances, for which the members are exceedingly grateful to their fellow officers of the National Guard.

Major General Leon B. Kromer, Chief of Cavalry, was the guest of honor at an informal luncheon given by the 61st Cavalry Division Association at the Yale Club in New York City on Thursday, March 7th.

The General spoke briefly on the most interesting subject of Mechanization.

Among those attending were Major General Dennis E. Nolan, Commanding Officer of the 2nd Corps Area; Major General William N. Haskell, commanding the New York National Guard; Brigadier General N. H. Eggleston, Colonel George H. Baird, Colonel Jerome Kingsburg, Colonel William M. Connell, Major Frederick Vietor, Major Guy V. Thompson, Major Theodore B. Appgar, and 30 members of the Association. Lieutenant Edward A. Maher, 3rd, recently elected President of the 61st Cavalry Division Association, presided at the luncheon.

Headquarters 305th Cavalry Philadelphia, Pennsylvania

THE first phase of the inactive duty season ended February 27th. This period was marked by an increasing interest which is truly a tribute to the spirit which motivates officers and men of the 305th. Especially is this interest commendable when one considers the voluntary factor involved with inactive duty training and the sacrifice of time and expenditure incurred by the individual. The second phase is entered with the same fine will to do and learn that is the very essence of the cavalry spirit.

Preparations are going apace for the celebration of Organization Day, April 17th, with Major Bell's skilled team of riders practicing for the exhibition drill included in this annual affair.

Major Livingston (Plans and Training Officer) and other regimental staff officers are at it again, planning a miniature war between the traditional enemies, the Reds and Blues, at Valley Forge Park. The terrain is ideal for the employment of cavalry, lending itself to the many combat problems which arise in the course of a campaign. The coming Command Post Exercise involves close co-operation on the part of the arms and services, in this case: Headquarters and Communication Troop, 52nd Cavalry Brigade (1st Troop, Philadelphia City Cavalry), the 108th Field Artillery (Pennsylvania National Guard), 103rd Observation Squadron (28th Division Air Service), an attack squadron of the local Naval Reserve. The problem is one of counter-reconnaissance. It will require about four hours to accomplish the mission, and the problem will be followed by a lunch in the open and a critique.

Our hard-riding poloists have had a fair measure of success considering all the disadvantages by which they are handicapped. Mounts are only fair, and many of the players are lacking in seasoning and experience. Scores to date are:

305th Cavalry	4	1st City Troop	9½
305th Cavalry	7½	Essex Troop	6
305th Cavalry	4	P.M.C. Reds	7
305th Cavalry	4	112th Field Artillery	14

306th Cavalry Baltimore, Md.

RECENT conferences have been well attended and have proved interesting. Two-sided free map maneuvers conducted by officers of the regiment have been instructive and keenly fought.

Enrollment in the extension courses has increased since January 1st.

In preparation for active duty training, the number of conferences is to be doubled during the next three months.

Arrangements have been made through the instructor in Washington, D. C., which will permit the Baltimore officers to attend the bi-monthly equitation classes at Fort Myer, Virginia.

Second Squadron and Machine Gun Troop 306th Cavalry Washington, D. C.

ORGANIZATION Day, February 7, 1935, was celebrated with appropriated memorial services at St. John's Episcopal Church in Washington, D. C., on Sunday, February 10, 1935, at 5:30 P.M. Following these services a stag dinner was held at the Army and Navy Club, at 7:30 P.M.

These functions were attended by the Governor of Maryland, the Honorable Harry W. Nice; the Chief of Cavalry, Major General Leon B. Kromer; the officer in charge of civilian components, Third Corps Area, Colonel Harry N. Cootes; the Chairman of the Military Affairs Committee of the House of Representatives; and several foreign military attachés.

A very large percentage of the officers of the regiment was in attendance, including the regimental commander, Colonel J. P. B. Hill, who acted as toastmaster at the dinner.

307th Cavalry Richmond, Virginia

FIRST Lieutenant Robert B. Batte of Norfolk, Va., has been ordered to attend The Cavalry School, and Second Lieutenant Walter R. Tayloe of Fredericksburg, Va., has been authorized to attend The Cavalry School during the period March 2nd to May 31, 1935, at his own expense and without expense to the Government.

Captain Henry Howard Page and Second Lieutenant Percival C. Wooters have recently been ordered to duty with the C.C.C. First Lieutenant Louis B. Powell, who was one of the first officers of the regiment to be detailed on C.C.C. duty, is now "Project Superintendent," C.C. C. Camp TVA-4-Va., Jonesville, Va.

To date, the following officers of the 307th Cavalry are on duty with the Civilian Conservation Corps somewhere in the U.S.A.: Captains Stokes, Page, and Matthews; First Lieutenants Franklin, Renn, Mooring, Day, Michael, W. G. Talman, and Southall; Second Lieutenants Peyton and Wooters. Several other officers have applied and expect to be detailed soon.

A 307th Cavalry conference was held jointly with the Coast Artillery Reserve Units on February 27, 1935, and consisted of instruction in Military Law in the form of a mock court-martial. The scenario, written by Major James C. R. Schwenck, Cavalry, Unit Instructor, 307th Cavalry, was built up about a young reserve lieutenant, rich, spoiled, and undisciplined, who had been called to active duty in an emergency. His troop commander was a hard-boiled, old time, regular army first sergeant with a reserve commission as captain. The first sergeant of the troop was also a soldier of the old school, ex-regular, and an ex-penitentiary guard. The young lieutenant felt crushed between these two professional soldiers, resented being disciplined by the captain and reacted as would a spoiled child. This caused him to seek outside diversions to relieve the strain. Thus began his downfall which resulted in his appearance before a general court.

Captain Butts of the 916th C.A., ably took the part of the hard-boiled troop commander and accuser in the case. Lieutenant Patton, 307th Cavalry, as the first sergeant of the troop, performed naturally as an old soldier on the witness stand. Lieutenant Sale, 307th Cavalry, took the part of the desk clerk of the hotel at which the accused was found by his troop commander under conditions which led to his trial. The parts of waiter and bellboy at the hotel, both material witnesses, were played by Lieutenants Beirne and Tompkins respectively, both officers being from the 307th Cavalry. All played their parts excellently and afforded much amusement to the audience by the humor they introduced into their testimony.

The accused officer, Lieutenant Earnest of the 307th Cavalry, was prosecuted by Captain J. E. C. Conrace, 916th C.A., as trial judge advocate, and by Lieutenant D. E. Booz, 916th C.A., as assistant trial judge advocate. The accused was represented by Captain J. N. Clark, 916th C.A., and Lieutenant Miles of the 307th Cavalry, as defense counsel and assistant defense counsel respectively. Arguments pro and con between these officers and their examination of witnesses were interesting and, at times, amusing to the audience.

The court proper consisted of Major Carswell, unit instructor, Coast Artillery Reserve Unit, as president and law member; Captain Cosby, 307th Cavalry; Captain Millhiser, 916th C.A.; First Lieutenant Jacobson, 916th C.A.; First Lieutenant Jamerson, 307th Cavalry; First Lieutenant Miller, 307th Cavalry; First Lieutenant W. T. Talman, 307th Cavalry, and Lieutenant Epps, 307th Cavalry.

The attendance at this conference was greater than that of any previous assembly for instructional purposes ever

held for reserve officers in this city. Eighty-six officers of all Arms and Services were in attendance, and all were interested in the subject. At the conclusion of the trial, a number of questions were raised by these officers on various phases of military law.

An assembly of the National Guard and Reserve officers of Richmond, Va., and vicinity was held at the John Marshall Hotel, on Wednesday, March 6, 1935, to meet Major General Robert E. Callan, U. S. Army, the new commander of the Third Corps Area.

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Third Squadron and Machine Gun Troop 307th Cavalry Norfolk, Virginia

FIRST Lieutenant Robert B. Batte (Troop "I"), left on February 28th to attend the National Guard and Reserve Officers course at the Cavalry School, Fort Riley. This is the first time an officer from the Norfolk units has been detailed to the school, and we are all gratified that Batte's conscientious and efficient work ever since he has been a member of the squadron has received its well deserved reward.

At the troop school meeting on February 19th ten officers were present, a record for this unit. Interesting and well prepared discussions were given by Major James R. Mullen, the squadron commander, on "Riot Duty"; Second Lieutenant Rufus G. Baldwin, Jr., on "Outposts for Small Commands"; and Second Lieutenant Winfred S. Hayman, on "The Cavalry Platoon in Dismounted Combat."

First Lieutenant Walter L. Renn, Jr., is still on active duty with the C.C.C. at Snowden, Va. Six other officers of the squadron have made application for this duty and are hoping that the proposed increase of the C.C.C. will give them all a chance for at least six months of this valuable training.

Major J. R. Finley, Cavalry, the Unit Instructor, attended the meeting of the Federal Business Association of Norfolk on February 26th.

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Headquarters 308th Cavalry Pittsburgh, Pa.

OFFICERS of the regiment gave a regimental farewell dinner for Major Hubbard at the Yale-Harvard-Princeton Club, Pittsburgh, Pa., on February 9, 1935. Major Hubbard was presented with a scroll containing the names of all officers of the regiment. The dinner was well attended.

Major Hubbard sailed from New York, February 19, 1935, for his new station, Fort McDowell, California.

The regular conferences and extension school classes are now conducted entirely by 308th Cavalry officers. While this requires a great deal of study on the part of those acting as instructors, it is time well spent, as it gives them an opportunity to perform the duties appropriate to their assignment.

Sunday morning equitation classes are being resumed at the 308th Cavalry Training Center, and several tactical rides are being planned for the inactive training period March 1st to June 30, 1935.

A pistol team is being organized among the crack shots of the regiment, and the members expect to acquit themselves creditably this coming summer.

The promotion of Second Lieutenant Orrie L. Marvin to First Lieutenant is announced.

Captain James J. Firestone, Q.M.C., is now acting unit instructor.

862nd Field Artillery (Horse) 62nd Cavalry Division Baltimore, Md.

THE course in gunnery, covering TR 430-85, which has been conducted during these winter months is nearing its completion. The next few conferences will be devoted to tactical problems involving the use of the battalion and regimental staffs and the cooperation between the artillery and the supported arms.

A greater attendance is desired at the bi-weekly pistol practices held in the sub-basement of the Post Office Building, Baltimore, on the second and fourth Wednesdays of each month, so that the 862nd may successfully choose a team to compete against the 306th Cavalry team of Baltimore.

Request has been forwarded to the Commanding General, Fort Hoyle, to grant the usage of suitable mounts for riding on the first and third Sundays of each month for the officers of the 862nd F.A. Arrangements have already been made at Fort Myer for any officers of this regiment who prefer to ride there Sunday mornings.

156th Cavalry Brigade San Antonio, Texas

(Extracts from the *Bulletin of the Cavalry Club of the Southwest*, February 27, 1935.)

ANNUAL MEETING

The annual meeting of the Cavalry Club of the Southwest was held at "La Tapatía," Thursday, February 7th, at which time the daddy and mentor of the Club, Colonel Daniel D. Tompkins, was elected President of the Club for 1935 by acclamation. Major H. A. Bartels and Captain W. K. Alston were elected for their second terms as Vice-President and Treasurer respectively. The full slate of officers for 1935 follows:

President, Colonel D. D. Tompkins, Cavalry.

Vice-President, Major H. A. Bartels, Dental Reserve.

Treasurer, Captain W. K. Alston, Q.M. Reserve.

Corresponding Secretary, Lieutenant Donald Sandison, Cavalry.

Recording Secretary, Lieutenant W. H. Miller, Dental Reserve.

Editor, *The Trooper*, Lieutenant Frank Prassel, Engineer Reserve.

Executive Committee, Major Edwin O'Connor, Cavalry; Lieutenant L. L. Morris, Q.M. Reserve, and Lieutenant A. L. Duran, F.A. Reserve.

HISTORY OF THE CLUB

The Cavalry Club of the Southwest had its origin in the "After Troop School Discussions" of Colonel Tompkins's Cavalry classes in the opening months of 1932. The spirit of the club is well expressed in the preamble to the constitution of the club: "The aim and purpose of the CAVALRY CLUB OF THE SOUTHWEST shall be to foster the spirit of the Cavalry and the love of a horse, and to further the *esprit de corps* of its active members, Officers of Cavalry of the United States Army, throughout the great Southwest, by tradition the home of the mounted soldier." The club has existed primarily for the professional development of its members, good fellowship and social activity following as a natural consequence. The Cavalry Club has never been, in any sense, a competitor of the Reserve Officers' Association; the majority of its members are members of the R.O.A. also. The Cavalry Club simply offers a supplementary field of activity for the reservist.

The nucleus of the Cavalry Club was formed with the Cavalry Reserve officers who attended the troop schools of the 156th Cavalry Brigade during 1931-32. With the adoption of the club constitution, it was decided to have three classes of membership: Active, confined to Cavalry officers; Associate, to include the officers of all other branches of the Army; and Honorary, to be conferred on outstanding men. The club has proved so popular and grown so rapidly that the active members form a very small portion of the club's membership at the present time. It is well to note here that associate members and honorary members enjoy all of the privileges of the active members, except that only an active member is eligible to be president of the club.

Every club has a small group of members who form the backbone of the organization and originate most of the activity. In the Cavalry Club this group is known as the "Old Guard." From the beginning this group has included Colonel Daniel D. Tompkins, the daddy and mentor of the organization; Captain George C. Roper, the first President of the Club; Lieutenant B. F. Basila, the first Secretary and second President of the Club; Lieutenant Meredith C. Engel, on the first Executive Staff and the third President; Lieutenant Robert D. Maxwell, who originated the Club news bulletin, *The Trooper*; with genial Major H. A. Bartels, who has twice been elected Vice-President of the Club, with Captain W. K. Alston, twice elected Treasurer of the Club.

In 1932 Captain George C. Roper, an enthusiastic horseman, started the activities of the newly organized Club with an equitation class, which was held at a local stable, where a special rate was secured for club members. Riding was the principal activity of the Club during the presidency of Captain Roper, who balanced his program with some rifle firing, dinner dances and club outings.